D5.1 Readiness of European Regions for Integrated Care

Annex G: Self-assessment process in Puglia

WP5 Maturity Assessment for Integrated Care

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Acronyms

CAO	Chief Administrative Officer
CCC	Community Care Centre
CEO	Chief Executive Officer
CH	Community Hospital
CMO	Chief Medical Officer
COPD	Chronic Obstructive Pulmonary Disease
EHR	Electronic Health Record
ERDF	European Regional Development Fund
H&SC	Health and Social Care
HTA	Health Technology Assessment
ICT	Information and Communication Technology
IT	Information Technology
LHA	Local Health Authority
PbR	Payment by Results
PPP	Public Private Partnership
UVM	Multidisciplinary Evaluation Unit
WP	Work Package

Figures and Tables

1 Introduction to Puglia Region

Puglia Region covers 19,541 Km² with a population of 4,029.053[1] inhabitants, with a population density of 201.2 inhabitants/km². Life expectancy in the Region is of 82.5 years, with fertility rate of 1.23 children per woman, and mortality rate of 252,572 per 100,000 inhabitants[2]. The top four causes of death in the Region reflect the national trends with some minimum variations and are: diseases of the circulatory system (31.57); cancer (23.27); diseases of the respiratory system (7.16); metabolic diseases (5.16); and diabetes mellitus (4)[3].

1.1 Introduction to the regional healthcare system

The healthcare system in Puglia Region is mainly public. There are also some private structures that contribute to the delivery of care and formally cooperate with the public system so that citizens can access these services on the same rules as applied for the public services. In the recent two years, there is an undergoing major re-organisation of the healthcare system. At the moment the healthcare service delivery is organized in: 45 Health & Social Care (H&SC) Districts, gathered in six Local Health Authorities (LHAs), which include 31 Integrated Community Care Centres; five second level hospitals (average 825 beds), 16 first level hospitals (average 299 beds), and 12 basic hospitals (average 127 beds). The above-mentioned public Hospitals include two Hospital Trusts and two Research Hospitals.

In 2018 the Puglia Region healthcare expenditure reported was € 7,231 million[4]. The healthcare expenditure per capita was € 1,798 with a GDP per capita of € 17,994 (10% incidence). In 2019 the National Government allocated about € 113,810 million to the National Health System in Italy; about € 111,490.270millionwere allocated to ensure Essential levels of care among Italian citizens, distributed in the following percentages: Prevention Level (5%); District Level (51%); and Hospital Level (44%). In 2019 the Apulian Regional Fund for Health was about €7,400 million to ensure the delivery of prevention activities in living and working places (5%), primary and secondary care by out of Hospital services (39%), pharmaceutical care (13%), hospital care (44%).

In Puglia Region hospitalisation rate standardised per age and sex is 109,92 per thousand inhabitants in the year 2017[5]. In particular hospitalisation rates are: 256,38 per 100,000 residents aged 50-74 years for cardiac deficits; 51,56per 100,000 residents aged 50-74 years for chronic obstructive pulmonary disease (COPD) 6; and 42,25 per 100,000 residents aged 35-74 years for diabetes[7].

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[1]Source ISTAT, 2018https://www.istat.it/it/dati-analisi-e-prodotti/contenuti-interattivi/popolazione-residente
[2]Source EDOTTO DISAR - elab MeS - 2017, 2013 – 2015 data
[3]Source ISTAT, 2017http://dati.istat.it/
[4]Source 2018 State General Accounting Department MOD CE
[5]Source EDOTTO DISAR - elab MeS - 2017, 2013 – 2017 data
[6]Piano della Performance 2019-2021 https://www.sanita.puglia.it/web/ospedaliriunitifoggia/piano-della-performance
[7]Source EDOTTO DISAR - elab MeS - 2017, 2013 – 2017 data

In the year 2018 a total of 465,808 hospitalisations occurred in the Region across the six LHAs[8].

1.2 Definition of integrated care

In Puglia, the prevalence of people with chronic care conditions was recorded as 40% of the population in the year 2015. The service provision to enable the delivery of care used up to 80% of the available resources for care delivery in the Region[9]. Since 2004, Puglia has started introducing the Integrated Care Model to improve the disease and care management of chronic patients. The Model is now at its 3.0 revision and it is based both on the vertical integration among different care settings (i.e. specialised care and primary care), and on the horizontal integration among professionals within the same care setting, which shall start in the GPs practices. This implies the definition of new specific healthcare pathways based on: pathology; promotion of patient empowerment; co-creation of digital systems to support the delivery of care to citizens and facilitate communications among professionals and a better control of resources and more appropriate setting for care delivery. This Model revolves around the patients, who are engaged in decisions about their personal care plans. The plan is tailored to patient needs as a result of teamwork between the GP, the Specialist, the Specialist nurse, and the care giver.

Fig.1 – Integrated care model in Puglia Region

[8]Source EDOTTO 2018 data

[9]DELIBERAZIONE DELLA GIUNTA REGIONALE 30 ottobre 2018, n. 1935 - Modello di gestione del paziente cronico "Puglia Care". Governo della domanda e presa in carico dei pazienti cronici.

The main components of the ongoing process of health and social care services integration in Puglia are:

- selection and stratification of patients in risk classes or severity classes (choosing patients with no risk, or patient at low risk of chronic conditions);
- definition of an "Individual Care Plan", adapted at the specific context, evidence-based, tailored to address specific social and care needs and based on professional coordination;
- development of an IT platform to support patients enrolment and management of their entire care paths, able to share information with the regional health IT system EDOTTO[10] and with the patients electronic Health records;
- adoption of an additional payment of GPs by specific health goals;
- continuous training of health and social care professionals; and
- empowerment of patients and care givers.

2 Introduction to the self-assessment process in Puglia Region

In Puglia, the self-assessment process was conducted at local level, as the paramount regional health system at a "meso" level: the aim was to assess the maturity of the six Local Health Authorities (LHAs) in delivering integrated care. Figure Fig.2 depicts the geographical distribution of the six LHAs in the Region, in Italy.

The maturity of the six LHAs has then enabled cross-organisation analysis, leading to the assessment of the maturity of Puglia Region with the variations captured along the process, which provides a qualitative, multidimensional and multi-professional representation of the integrated care status in the Region from the stakeholders' point of view.

[10] https://www.sanita.puglia.it/documents/20182/156357/Brochure+Edotto+%28Edotto.pdf%29/d8f1e0f4-64fd-46b4-bea1-2d4ab0cb47c1

Fig.2 – Local Health Authorities in Puglia Region

To capture a comprehensive representation starting from the "micro" level, in each LHA a diverse profile of stakeholders was invited to participate in the self-assessment process, ranging from the representatives of health and social care, citizen's rights representative, General Practitioner, Regional Healthcare Manager and other. All stakeholders were invited to complete the online self-assessment survey to provide their individual perceptions on the progress of integrated care in Puglia, using the SCIROCCO Exchange Tool. The outcomes of these individual surveys were captured in the form of spider diagrams to highlight Puglia LHAs' strengths and weaknesses in integrated care provision. The spider diagrams presented in the following sections illustrate the perceptions of some stakeholders on the progress towards integrated care in the Puglia Region.

2.1 Methodology of the self-assessment process

The self-assessment process of adoption and scaling-up of integrated care in nine European Regions involved the use of the SCIROCCO Exchange Tool. This is structured as a 12 questions survey, each of which is associated to a particular "dimension". The 12 dimensions are:

Q1. Readiness to Change;
Q2. Structure & Governance;
Q3. Digital Infrastructure;
Q4. Process Coordination;
Q5. Finance & Funding;
Q6. Removal of Inhibitors;
Q7. Population Approach;
Q8. Citizen Empowerment;
Q9. Evaluation Methods;
Q10. Breadth of Ambition;
Q11. Innovation Management; and
Q12. Capacity Building.

The maturity level in each dimension is evaluated by an assessment scale which goes from a minimum rating of "0" to a maximum rating of "5".The scale is tailored and described in detail for each of the 12 dimensions to support the assessor (i.e. the selected stakeholders) in the score assignment.

Assessors were appointed from LHA Management Team after an official and specific AReSS request: five stakeholders per each LHA with diverse background and different roles within the organisation, to be identified comprising: a representative of the Top Management (e.g. CEO, CMO, CAO); a representative of the Health & Social Care District; a representative with medical background (e.g. Care Manager, Chief Nurse); a representative of the ICT Team; and a patients' group representative. This allowed to gain multiple perspectives, in which the experience in each role and the affiliation to the local organisation where recorded to support the data analysis.

Upon receiving the names and contact details of the appointed LHA stakeholders, AReSS Puglia formally invited each of them via e-mail to take part to the maturity assessment process. All stakeholders belonging to the same LHA were carbon-copied in the e-mails, so that they were all made aware of the fellow colleagues involved in the process.

In the e-mail the full process was described, the link to the SCIROCCO Exchange Tool was provided, together with a dedicated helpline. Supportive documents sent along with the invitation to complete the on-line survey comprised completion guidance with steps to follow, with visuals and screenshots to guide the entire process from beginning to completion and submission.

In the assessment phase, together with the score, each participant stakeholder was invited to provide a brief justification for the score assigned.

The results were plotted on individual spider diagrams for each self-assessment completed, whose combination during the consensus stage originated a spider diagram over the scores individually provided and visualised with bubbles as depicted in figure Fig.3. The size of the bubble represents the number of respondents, which varied from five to seven per LHA, while the position of the bubble corresponds to the score given, that is to say 0 to 5, where 0 corresponds to the most inner circle while 5 is on the outset circle.

Fig.3 – Self-assessment tool visualisation

3 Self-assessment process – Bari Local Health Authority

3.1 Introduction to Bari Local Health

Bari LHA hosts the Regional county seat and is the result of the merge of four LHAs within the territory of Bari Province in the year 2006. Nowadays it operates on a territory of 3,862.88 Km^2, with 1,251,994 inhabitants[11], comprising a total of 41 municipalities, which are organised in 12 H&SC Districts.

There are 15 acute care infrastructures, of which eight are public (comprising one cancer research centre, and one university hospital), and seven are private with public access via NHS agreement (comprising one rehabilitation centre, and one religious institution)[12].

In BA LHA there is a total of 1,014 GPs (without considering Paediatricians), of which 795 (i.e. 78.4%) are structured in complex networks to ensure seamless care delivery to patients[13] (max 12 hh)[14].

The population distribution per age groups shows that 20.7% of the population is over 65 years old, of which only 10% is above 74 years old[15]. The same data returned 41,941 foreigner residents in Bari metropolitan area, which corresponds to the 3.3% of the entire figure, with majority coming from Albania (i.e. 28.5% of the total number of foreigners).

Chronic diseases are among the elements of concern within Bari LHA, as they require demanding and continuous efforts to deliver care services. To be effective and efficient, it is crucial to identify the chronic patients and let them enter into the integrated care delivery pathway in the most appropriate way. This often requires excessive efforts. The EDOTTO Regional System is in place to allow the analysis of health data and identify the citizens that shall enter into the pathway.

The seven most frequent chronic diseases in Bari LHA are: diabetes, respiratory insufficiency (IRC), hypertension mediated organ damage, cancer, Hashimoto thyroid, cardiac diseases, and hypertension with no organ damage[16].

3.2 Identification process of the local stakeholders

AReSS Puglia asked Bari LHA Top Management to appoint a minimum of five stakeholders to gather different assessment perspectives concerning the 12 maturity matrix dimensions and to obtain a multi-stakeholder opinion on integrated care local initiatives. AReSS Puglia

[11]Source ISTAT 2018 data https://www.istat.it/it/dati-analisi-e-prodotti/contenuti-interattivi/popolazione-residente
[12]Source EDOTTO- regional health IT System
[13]Source EDOTTO - regional health IT System
[14]Source EDOTTO - regional health IT System
[15]Source ISTAT 2017 data.
[16]Piano della Performance 2018-2020 https://www.sanita.puglia.it/documents/25619/357655/Piano+della+Performance_2018-2020/fd0f07b3-9744-4514-9c77-bc53613ce2ed

specified the different roles within which to identify the assessors comprising: a representative of the Top Management (e.g. CEO, CMO, CAO); a representative of the Health & Social Care District; a representative with medical background (e.g. Care Manager, Chief Nurse); a representative of the ICT Team; and a patients' group representative. Experience in each role and the affiliation to the local organisation where recorded to support the data analysis.

Bari LHA identified five stakeholders as requested, to which other two were later added, one of which has previously taken part to the EU-funded SCIROCCO Project, while the other had a relevant role but is only present in Bari LHA (this is related to the scale of the LHA). The final list of the local stakeholders identified by Bari LHA who completed the self-assessment process is reported in table Tab. 1below, with years spent in the role and years spent in the organisation to contextualise their individual responses during the analysis.

Role	Affiliation	Years in role	Years in organisation
Chief Medical Officer	BariLHA	5	19
H&SC District Director	District 14	27	27
Nurse Coordinator	District 14	37	31
IT services Director	Bari LHA	3	3
President of Patients 'Association	APMAR Association	6	8
Sick Patient Court Coordinator	Bari LHA	3	20
H&SC Services Director	Bari LHA	2	20

Tab. 1-BA LHA stakeholders

3.3 Self-assessment survey

Upon receiving the names and contact details of the seven designated stakeholders by Bari LHA, AReSS Puglia formally invited each of them via e-mail to take part to the maturity assessment process. All stakeholders were carbon-copied in the e-mails, so that they were all made aware of the fellow colleagues involved in the process.

In the e-mail the full process was described, the link to the SCIROCCO Exchange Tool was provided, together with a dedicated helpline. Supportive documents were sent along with the invitation to complete the on-line survey comprised completion guidance with steps to follow, with visuals and screenshots to guide the entire process from beginning to completion and submission.

Two weeks' timeline was suggested for completion, which was eventually extended because of holiday season in Puglia. The SCIROCCO Exchange project team provided support to the stakeholders during the completion of the on-line survey.

3.4 Outcomes of self-assessment survey

Table Tab. 5 provides a summary of the 0 to 5 ratings provided by the seven stakeholders on each of the 12 dimensions of the SCIROCCO Exchange Tool. The ratings assigned by each

stakeholder vary from 0 to 5for the dimensions Q6 and Q8, from 0 to 4 for the dimension Q5, while for the dimension Q12 the ratings vary from 2 to 5.

The stakeholders, who have been working in Bari LHA for individual periods that vary from 3 to 31 years and who have been providing services in their roles for periods of time that vary from 2 to 37 years, have provided a heterogeneous perception of the 12 dimensions of the SCIROCCO Exchange Tool, as far as they are concerned.

The dimensions on which majority of the stakeholders appeared to have a similar perception are: Q11 “Innovation Management” and Q12 “Capacity Building”, on which respectively only one out of seven rated the dimension on the highest (in green) end of the scale, and two out of seven rated the dimension on the lowest (in red) end of the scale.

Figure Fig.4 depicts the outcomes of the on-line individual self-assessment, as completed by each BA LHA stakeholder.

	Tool Dimensions											
Stakeholder Role	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Chief Medical Officer	3	3	0	4	1	1	4	4	3	4	2	3
H&SC District Director	3	4	2	3	1	2	2	2	4	4	3	3
Nurse Coordinator	2	1	2	2	0	1	4	1	4	3	2	3
IT services Director	1	0	0	1	2	0	2	0	2	2	1	2
President of Patients' Association	2	4	4	4	3	2	4	4	4	4	3	3
Sick Patient Court Coordinator	4	2	4	4	4	5	3	5	3	3	3	5
H&SC Services Director	2	3	1	3	1	1	2	2	2	3	1	3

Dimensions			
Q1	Readiness to Change	Q7	Population Approach
Q2	Structure & Governance	Q8	Citizen Empowerment
Q3	Digital Infrastructure	Q9	Evaluation Methods
Q4	Process Coordination	Q10	Breadth of Ambition
Q5	Finance & Funding	Q11	Innovation Management
Q6	Removal of Inhibitors	Q12	Capacity Building

Ratings		
5 to 4	3 to 2	1 to 0

Tab.2 - BA LHA summary of self-assessment

Chief Medical Officer

H&SC District Director

Nurse Coordinator

IT services Director

President of Patients' Association

SP - Sick Patient Court Coordinator

H&SC Services Director

Fig.4 –BA LHA outcomes of the individual self-assessments

3.4.1 Stakeholder workshop

Upon completion of the self-assessment survey by all the seven designated stakeholders of BA LHA, an invitation letter was sent by AReSS Puglia to the LHA via e-mail, to request a feasible date to organise a half-day meeting, comprising a two-hours workshop, followed by a 30 to 45 minutes focus group with all the stakeholders on their experience with the SCIROCCO Exchange Tool.

The stakeholders identified Wednesday9th October as the best option for attending the workshop, which was delivered to them on-site at the General Direction of Bari LHA, in Bari.

The purpose of the workshop, which was facilitated by Dr. Mingolla and Dr. Pantzartzis in Italian language, was to: present the assessment process in the Puglia Region; present the initial outcomes of the on-line self-assessment; discuss on the assessments of each dimension; and reach a consensus on the maturity of integrated care in BA LHA.

Fig.5 -BA LHA consensus workshop

3.4.2 Negotiation and consensus building

After the presentation, with the support of a PowerPoint presentation and hand-outs, of the summary of the on-line self-assessment survey, the invited stakeholders were guided through the negotiation process with a PowerPoint presentations and visuals. The purpose of the negotiation process was to: 1) share the multiple perceptions that guided each stakeholder

during the self-assessment, including their experience in the LHA and in their specific roles; and 2) identify the chance to negotiate a shared ranking for each dimension, upon knowledge and information sharing during the workshop.

The negotiation and consensus building process was delivered through an in depth analysis of each dimension of the SCIROCCO Exchange Tool, presenting and discussing the justifications and reflections that each stakeholder has provided in their on-line self-assessment. Each dimension is reported below, in the order as discussed.

Q1 – Readiness to Change -The stakeholders have heterogeneous perceptions of this dimension. They agree on the lack of consistency in the management, as BA LHA is the result of the merging of multiple LHA in the year 2007.The CMO described the process of merging and the efforts made throughout the years to enable BA LHA to operate as one single entity. As the aspiration and desire to change is evident, but there are still constraints at cultural level, the stakeholders agree on assessing this dimension 3 – *Vision or plan embedded in policy; leaders and champions emerging*.

Q2 – Structure & Governance – This dimension brings to light the variations that exist at local level, which may operate in a positive way, thus providing organisational flexibility, but also results in negative processes if governance is not imposed from above. The most critical ratings were provided by the IT services Director and the Nurse Coordinator, who do recognise the lack of governance as uttermost issue towards process delivery, hence in a stronger need for its actual provision. The stakeholders agree on assessing this dimension 3 – *Governance established at a regional or national level*.

Q3 – Digital Infrastructure - Three out of seven stakeholders agree on rating this dimension on the lowest end of the scale (i.e. "0" and "1"). Nevertheless, the two patients' representatives rated this dimension 4 – *eHealth services to support integrated care are deployed widely at large scale* (e.g. Edotto system), despite not all the users are fully enabled to access and operate with digital infrastructure. Different IT literature levels at different age groups may work as barrier towards a full implementation of digital infrastructure. After evaluating the current situation, the stakeholders agree on assessing this dimension 2 – *There is a mandate and plan(s) to deploy regional/national eHealth services across the healthcare system but not yet implemented*.

Q4 – Process Coordination – Three out of seven stakeholders agree on assessing this dimension 4 – *A unified set of agreed standards to be used for system implementations specified in procurement documents; many shared procurements of new systems; consolidated data centres and shared services widely deployed*, while other two out of seven assessed it "3". The President of Patients' Association describes that there is a standardised process through which the citizen accesses the system of integrated care, while the CMO confirms that this is actually in place. As a consequence, the stakeholders confirm the rating "4".

Q5 – Finance & Funding – Four out of seven stakeholders agree on assessing this dimension very poorly (i.e. "0" and "1"), and as the overall understanding is that funding is available and the stakeholders are capable of identifying their availability and initiate the process

where appropriate, nevertheless the policy system is quite complex and time-consuming, with often inefficient outcomes. The Nurse Coordinator offers examples related to the home-care delivery (e.g. use of tablet by the nurse; inappropriate waste disposal). The stakeholders reach consensus on 3 -*Regional/national (or European) funding or PPP for scaling-up is available*.

Q6 – Removal of Inhibitors –Also on this dimension, four out of seven stakeholders agree on a rating towards the lowest end of the scale (i.e. "0" and "1"), also due to the individual resistance that some professional categories are posing (e.g. GPs and nursing staff). One point of agreement among the stakeholders is the need to integrate across professional categories and to overcome the individual resistance. Consensus is reached on 2 -*Strategy for removing inhibitors agreed at a high level,* as efforts are still required at local level.

Q7 – Population Approach – The stakeholders have a positive perception of this dimension. Despite the population approach is mostly evident on experimental bases; three out of seven stakeholders rate this dimension "4". After discussion and one example (i.e. Puglia Care Project[17]), all the stakeholders unanimously agree on rating the dimension 3 – *Risk stratification used for specific groups i.e. those who are at risk of becoming frequent service users.*

Q8 – Citizen Empowerment – The stakeholders have heterogeneous perceptions of this dimension, with ratings ranging from "0" to "5". This is the only dimension on which the full assessment scale has been used. The IT services Director explained that an integrated care delivery system should be focused not only on the clinical elements of care delivery. The Nurse Coordinator agrees with him on this element. The two patients' representatives are the stakeholders who have provided the highest ratings (i.e. "4" and "5") on this dimension, as they have the actual citizens' perspective to reflect on. After the discussion, all stakeholders converge on 4 – *Incentives and tools exist to motivate and support citizens to co-create healthcare services and use these services to participate in decision-making process about their own health.*

Q9 – Evaluation Methods – This dimension is rated on the higher end of the assessment scale with "2", "3", and "4". In particular, three out of seven stakeholders agree on assessing this dimension 4 - *Most integrated care initiatives are subject to a systematic approach to evaluation; published results.* Nevertheless, general consensus is reached on 3 - *Some integrated care initiatives and services are evaluated as part of a systematic approach.*

Q10 – Breadth of Ambition – This dimension is rated on the higher end of the assessment scale with "2", "3", and "4, with three out of seven stakeholders agreeing on assessing this dimension 3 -*Integration between care levels (e.g. between primary and secondary care) is achieved,* while other three assessing it 4 - *Most integrated care initiatives are subject to a systematic approach to evaluation; published results.* Final consensus is reached on rating "4", as a positive on-going evaluation.

[17]Puglia Care Project aims at improving coordinated care management for chronic patients. More info are available at http://www.salute.gov.it/portale/temi/documenti/investimenti/4bBD.pdf

Q11 - Innovation Management – All stakeholders have balanced perceptions on this dimension, other than two of them, who rate it 1 -*Innovation is encouraged but there is no overall plan*. The CMO links innovation to IT infrastructure, as sometimes the two may be related and posing barriers. The IT services Director and the H&SC services Director rate this dimension poorly, as Innovation Management is often seen as a mere "number of computer stations", and not as a structured process between the innovators (i.e. those who design the innovation system) and the policy makers at regional level. The stakeholders agree on 3 - *Formalised innovation management process is planned and partially implemented*.

Q12 - Capacity Building - All the stakeholders assessed this dimension in a positive way. Five out of seven stakeholders assessed this dimension 3 – Learning about integrated care and change management is in place but not widely implemented. Only one stakeholder rated it 5 - A 'person-centred learning healthcare system' involving reflection and continuous improvement is in place. Strong consensus is achieved on this dimension as all stakeholders, from the management team, to the clinical team, and to the patients' representatives are well aware of the efforts in place to put the citizen at the centre of the care delivery system. The assessment is confirmed also by The Sick Patient Court Coordinator, so that overall consensus is reached.

3.4.3 Final consensus

Figure Fig.6 illustrates the final spider diagram with the final consensus of the seven BA LHA designated stakeholders. The negotiation process highlighted elements of similarities and difference among the stakeholders, which were discussed and led to reaching consensus on almost all dimensions, but not always as assessed by majority of the stakeholders. Dimensions Q1, Q6, Q7, and Q9 are those on which the consensus was reached on a lower scale than that on which the majority individually assessed.

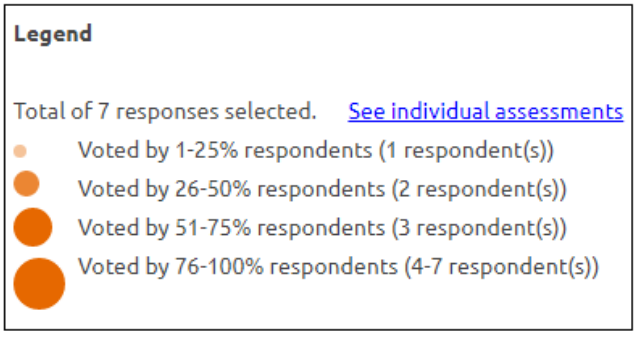

Fig.6 - BA LHA final spider diagram

Table Tab. 6 contains the final scores reached through the consensus building process that were summarised earlier on. Justifications and reflections on each of the 12 dimensions have been also reported.

Dimension	Consensus	Justifications & Reflections
Q1 - Readiness to Change	3	There is a lack of agreed management on individual procedures. This is the direct consequence of the organisation being created out of the aggregation of multiple organisations in the year 2007. The organisation is ready to change from a mere technological perspective. The vision exists. Implementing the vision still needs some cultural changes.
Q2 - Structure & Governance	3	Governance is established at regional level, but it needs to be implemented at organisational level, and in particular it does need to consider the existing variations which require flexibility.
Q3 - Digital Infrastructure	2	The implementation raises issues on the accountability for the data checks. Also, e-health services are accessed differently accordingly to different age groups.
Q4 – Process coordination	3	Standardisation at organisational level does exist when referring to patient access to the system and Care Pathways and Chronic Care Model.
Q5 –Finance &Funding	1	Funding is available mainly for pilot projects. It is absolutely crucial to timely identify sources of funding, as the process of using them for integrated care is slowed down by bureaucracy.
Q6 - Removal of inhibitors	2	Despite the amount of available training courses, there is sometimes opposition in undertaking them. This has been acknowledged at nurse and GP level.
Q7 - Population Approach	3	Risk stratification is only used on experimental level, that is to say for same types of care pathways.
Q8 - Citizen Empowerment	4	There is limited consensus on this dimension.
Q9 - Evaluation Methods	3	Some integrated care services are evaluated as part of a systematic approach.
Q10 - Breadth of Ambition	4	Strong consensus on this dimension.
Q11 -Innovation Management	3	Innovation management process is formally implemented. However, there are differences across different settings (e.g. hospital setting and ambulatory care setting).
Q12 - Capacity Building	3	Strong consensus achieved on this dimension.

Tab. 3 – BA LHA summary of consensus meeting

3.5 Analysis of the outcomes – Bari Local Health Authority

Looking at the overall consensus diagram, dimension Q8– Citizen Empowerment, and Q10 – Breadth of Ambition appear more significant than others in regards to carrying out integrated care in BALHA. Also, Q4 - Process coordination plays an important role within this LHA that has a population catchment greater than all the other five LHAs in Puglia Region, also as a

result of the aggregation of multiple LAs in the year 2007. None of the results was particularly surprising to the stakeholders, and the preliminary contextualisation provided by the CMO provided a clear background for discussion to all the stakeholders.

The final consensus diagram offers a balanced range across the 12dimensions about the maturity of integrated care in BA LHA, which is overall, assessed between the 3 and 4 points the reference scale 0 to 5. Nevertheless, there is a noticeable variation on dimension Q5 – Funding, then Q3 – Digital Infrastructure and Q6 - Removal of inhibitors. Those three dimensions have been respectively rated "1" and "2" on the assessment scale during the consensus workshop.

The common factor among those three dimensions and the low rating is the difficulty in: capturing the funding available to the LHAs; accessing and managing the data available on the digital infrastructure; and winning the resistance that some members among the clinical staff still have. This difficulty has been somehow related to the lack of planning and organisation throughout the entire LHA, also given the scale of it and its genesis.

Specific factors in the organisation BA LHA affect strengths and weaknesses. Among the specific factors that affect the weaknesses, there are: the size and how multiple LHAs belonging to different municipalities were joined together into BA LHA; and the lack of homogeneous management of each specific process within the LHA. The strengths are affected by the flexibility at operational level, as governance across the entire LHA enables it.

3.6 Key message – Bari Local Health Authority

All the participants stated that they had a very positive experience with the tool as a key facilitator of the self-assessment process. They appreciated the debate; they agreed that the tool is a powerful instrument to synthesize different visions; the self-assessment process should be applied at any level (local, regional, and local Districts). The LHA CMO: "The LHA assessment with the SCIROCCO Exchange Tool represents a positive experience that helps showing and understanding the citizen's perception".

3.7 Conclusions – Bari Local Health Authority

After the negotiation and consensus building process on each of the 12dimensions and the justifications provided by the five designated stakeholders on each of the 12dimensions, the facilitators have asked final comments on the strengths of BA LHA in relation to the maturity of the integrated care model. The stakeholders jointly agreed to suggest strengths and weaknesses as below reported.

The strengths are:

Q7 – Population Approach> This is an on-going process and it still needs to grow.

Q8 – Citizen Empowerment

Q10 – Breadth of Ambition

Q12 - Capacity Building>This is regarded as a strength as when competencies are acquired, then each stakeholder can deliver his/her specific task in a more appropriate way.

The weaknesses are:

Q1 – Readiness to Change>This is regarded as a weakness as it is fundamental that every stakeholder in the LHA gains a deep and full understanding of the need for change. Only after this need has been acquired by every stakeholder it is possible to deliver the change. It is an individual process that can only be leaded by the organization.

Q5 – Funding >This is a weakness as a result of the lack of capability to timely identify and capture available funding for integrated care.

The outcomes reflected the local situations and the expectations of the stakeholders. The emerged challenge is the size and scale of the organisation BA LHA, which affects every management process.

4 Self-assessment process –Brindisi Local Health Authority

4.1 Introduction to Brindisi Local Health

Brindisi LHA at the moment of writing covers a territory comprising a total of 20 municipalities, which are organised in four H&SC Districts, with five CC Centres, that put together a minimum of two up to a maximum of nine municipalities.

There are five acute care infrastructures, of which three are public, and two are private with public access via NHS agreement (comprising one cancer centre[18].

In BR LHA there is a total of 323 GPs (without considering Paediatricians), of which 227 (i.e. 70.3%) are structured in complex networks to ensure seamless care delivery to patients[19].

The total population was 392,975 inhabitants[20]. It was mostly concentrated in Brindisi H&SC District, with a density of 273.86 inhabitants/Km^2, which is well above the average density of 217.84 inhabitants/Km^2 of Brindisi LHA[21]. The population aged over 65 years was 21.36% according to ISTAT 2015 data, and 22.7% as recorded in 2018. It was not recorded any significant variations on the age groups moving from urban areas to more rural areas, nor from the coastal areas to the more inner areas. However, majority of the population (i.e. 39.98%) lives in municipalities that can count on a number of inhabitants between 10,000 and 30,000. The age group over 75 years has been increasing over time and more rapidly over the past five years, which has brought Brindisi LHA to pass the National indicator of longevity. Foreigner residents have increased of 2.36% from the years 2014 to the year 2015.

Mortality rate is approximately 1% of the population, and the first cause of death is related to circulatory diseases, and then followed by cancer, respiratory, endocrine, nutrition and metabolic diseases.

4.2 Identification process of the local stakeholders

AReSS Puglia asked to Brindisi LHA top management Team to appoint a minimum of five stakeholders to gather different assessment perspectives concerning the 12 maturity matrix dimensions and to obtain a multi-stakeholder opinion on integrated care local initiatives. AReSS Puglia specified the different roles within which to identify the assessors comprising: a representative of the Top Management (e.g. CEO, CMO, CAO); a representative of the Health & Social Care District; a representative with medical background (e.g. Care Manager, Chief Nurse); a representative of the ICT Team; and a patients' group representative. Experience in each role and the affiliation to the local organisation where recorded to support the data analysis.

[18]Source EDOTTO - regional health IT System
[19]Source EDOTTO - regional health IT System
[20]Source ISTAT 2018 data https://www.istat.it/it/dati-analisi-e-prodotti/contenuti-interattivi/popolazione-residente
[21]Piano della Performance 2019-2012http://www.comune.brindisi.it/zf/index.php/trasparenza/index/index/categoria/96

The local stakeholders identified by BR LHA upon invitation are reported in table Tab. 4 below, with years spent in the role and years spent in the organisation to contextualise their individual responses during the analysis.

Role	Affiliation	Years in role	Years in organisation
Chief Medical Officer	Brindisi LHA	<1	<1
H&SC district Director	Francavilla Fontana H&SC District	>30	>30
Nurse Coordinator	Ceglie Messapica H&SC District	>30	>30
IT services Manager	Brindisi LHA	>20	>15
President of Voluntary Association	Protezione Civile Mesagne	>15	>15

Tab. 4-BR LHA stakeholders

4.3 Self-assessment survey

Upon receiving the names and contact details of the five designated stakeholders by Brindisi LHA, AReSS Puglia formally invited each of them via e-mail to take part to the individual self-assessment process. All stakeholders were carbon-copied in the e-mails, so that they were made aware of the fellow colleagues involved in the process.

In the e-mail the full process was described, the link to the SCIROCCO Exchange Tool was provided, together with a dedicated helpline. Supportive documents were sent along with the invitation to complete the on-line survey comprised completion guidance with steps to follow, with visuals and screenshots to guide the entire process from beginning to completion and submission.

Two weeks' timeline was allowed for completion, which was eventually extended because of holiday season in Puglia.

4.4 Outcomes of self-assessment survey

All five invited stakeholder completed the on-line self-assessment survey with the dedicated support. Table Tab. 5 provides a summary of the 0 to 5 ratings provided by the five stakeholders on each of the 12 dimension of the SCIROCCO Exchange Tool.

The ratings assigned by each stakeholder vary from 0 to 4, without ever reaching rating 5 in any of the dimensions. The stakeholders, who have been working in BR LHA for individual periods that vary from 1 to 30 years and who have been providing services in their roles for periods of time again that vary from 1 to 30 years, have provided a heterogeneous perception of the 12 dimensions of the SCIROCCO Exchange Tool, as far as they are concerned.

The perception, hence the returned rating, of the dimension Q12 "Capacity Building" is the same by all the five stakeholders, while it has some variations on the remaining. In relation to the dimensions Q1 "Readiness to Change" and Q7 "Population Approach" only two out of five stakeholders rated in a homogeneous way each of the two dimensions, that is to say: "3-Vision or plan embedded in policy; leaders and champions emerging" for "Readiness to

Change; and "2- Risk stratification approach is used in certain projects on an experimental basis" for "Population Approach".

Figure Fig.7 depicts the outcomes of the on-line individual self-assessment, as completed by each BR LHA stakeholder.

	Tool Dimensions											
Stakeholder Role	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Chief Medical Officer	2	3	4	4	4	4	4	4	3	3	3	3
H&SC District Director	3	4	3	3	3	3	2	3	1	4	3	3
Nurse Coordinator	3	4	3	3	3	3	3	4	3	4	1	3
IT services Director	1	2	2	1	0	1	1	4	0	0	1	3
President of Voluntary Association	4	4	3	3	3	3	2	3	3	4	4	3

Dimensions			
Q1	Readiness to Change	Q7	Population Approach
Q2	Structure & Governance	Q8	Citizen Empowerment
Q3	Digital Infrastructure	Q9	Evaluation Methods
Q4	Process Coordination	Q10	Breadth of Ambition
Q5	Finance & Funding	Q11	Innovation Management
Q6	Removal of Inhibitors	Q12	Capacity Building

Ratings		
5 to 4	3 to 2	1 to 0

Tab. 5 – BRLHA summary of self-assessment

Chief Medical Officer

H&SC District Director

Nurse Coordinator

IT services Manager

President of Voluntary Association

Fig.7 – BR LHA outcomes of the individual self-assessments

4.4.1 Stakeholder workshop

Upon completion of the self-assessment survey by all the five designated stakeholders of BR LHA, a new invitation letter was sent by AReSS Puglia to the organisation via e-mail, to identify a feasible date to organise a half-day meeting, comprising a two-hours workshop, followed by a 30 to 45 minutes focus group with all the stakeholders.

The stakeholders identified Tuesday 24th September as the best option for attending the workshop, which was delivered to them on-site at the General Direction Office of BR LHA in Brindisi. The session required internet connection and projection facilities.

The purpose of the workshop, which was facilitated by Dr. Mingolla and Dr. Pantzartzis in Italian language, was to: present the assessment process in the Puglia Region; present the initial outcomes of the on-line self-assessment; discuss on the assessments of each dimension; and reach a consensus on the maturity of integrated care in ASL BR.

Fig.8 -BR LHA consensus workshop

4.4.2 Negotiation and consensus building

After the presentation, with the support of a PowerPoint presentation and hand-outs, of the summary of the on-line self-assessment survey, the invited stakeholders were guided through the negotiation process with a PowerPoint presentations and visuals. The purpose of the negotiation process was to: 1) share the multiple perceptions that guided each stakeholder during the self-assessment, including their experience in the Local Health Authority and in

their specific roles; and 2) identify the chance to negotiate a shared ranking for each dimension, upon knowledge and information sharing during the workshop.

The negotiation and consensus building process was delivered through an in depth analysis of each dimension of the SCIROCCO Exchange Tool, presenting and discussing the justifications and reflections that each stakeholder has provided in their on-line self-assessment. The process began starting from the only dimension that was unanimously shared among all the stakeholders (i.e. Q12) and moved on to the two more heterogeneous (i.e. Q1 and Q7), to which all the remaining followed. Each dimension is reported below.

Q12 - Capacity Building – All the stakeholders assessed this dimension 3 – *Learning about integrated care and change management is in place but not widely implemented*. The President of Voluntary Association agrees with the CEO. The H&SC District Director reports that planning actions exist at organisational level (i.e. ASL BR) but they still need to be translated into actions. The LHA CMO confirms that a strategy does exist at regional level as well as projects are already in place, hence a clear vision does exist. The H&SC Director and the CMO both refer to integrated care initiatives that have been recorded as best practices, hence reported in the submitted proposal as Reference Site of Puglia Region[22].

Q1 - Readiness to Change -The stakeholders have heterogeneous perceptions of this dimension. They agree on the existence of planning, nevertheless relevant strategies are still underway. There are pilot projects on management approaches that are trying to translate the vision into strategies. Lack of opportunities to translate vision in strategies and to bring the change to next level (i.e. sharing strategies across multiple stakeholders) is reported. The stakeholders agree on assessing this dimension 3 – *Vision or plan embedded in policy; leaders and champions emerging*.

Q2 - Structure & Governance – This dimension brings to light how different roles and different experiences within the organisation (i.e. ASL BR) have led to different scales in the assessment. The reason behind this is that the stakeholders who are more involved in taking action have different perceptions than those less involved. The President of Voluntary Association highlights the lack of training. The H&SC District Director confirms that the staff of the organisation has different perceptions from the users who access the services. The Nurse Coordinator confirms that her assessment exactly corresponds to the perceptions she has in her role. The stakeholders agree on assessing this dimension 4 – *Roadmap for a change programme defined and accepted stakeholders involved*.

Q3 - Digital Infrastructure - Three out of five stakeholders agree on assessing this dimension 3 – *eHealth services to support integrated care are piloted but there is not yet region wide coverage*. The LHA CMO reports that many unexploited opportunities exist because of lack of organisational (i.e. ASL BR) infrastructure. The President of Voluntary Association states that there is not a lack of IT at structural level, but at operational level: there is a lack of information on the existence of the IT network (e.g. patient records travel manually to the referral wards). The CMO confirms that more information and more training (e.g. Edotto

[22]Source http://www.regione.puglia.it/web/pressregione/pressregione-rss/-/asset_publisher/V2vFLtqdAjTg/content/id/45109213

system) are required. After discussion, the stakeholders reach consensus on 4 – *eHealth services to support integrated care are deployed widely at large scale*.

Q4 - Process Coordination – Three out of five stakeholders agree on assessing this dimension 3 –*A recommended set of agreed technical standards at regional/national level; some shared procurements of new systems at regional/national level; some large-scale consolidations of ICT underway*. The President of Voluntary Association explains that he is not fully informed to assess this dimension, as so he has assessed 1. The H&SC District Director confirms that processes are in place; however, the citizens should be informed and directed towards the existing and supportive processes. The stakeholders reach consensus on 3.

Q5 - Finance &Funding – Three out of five stakeholders agree on assessing this dimension 3 –*Regional/national (or European) funding or PPP*[23]*for scaling-up is available*. The President of Voluntary Association explains that he is not informed to assess this dimension, hence he has assessed as 0. The CMO Justifies assessing 4 this dimension with reference to the ERDF[24]. The H&C District Director provides an example of funding for tele-monitoring for patients at home (i.e. Hospital@Home Project[25]). Consensus on the assessment 3is reached.

Q6 - Removal of Inhibitors –Three out of five stakeholders agree on assessing this dimension 3 –*Implementation Plan and process for removing inhibitors have started being implemented locally*. The Nurse Coordinator agrees with all the fellow stakeholders the existence of an active training plan, despite being unsuccessful. The President of Voluntary Association suggests a better distribution of the organisation as a useful tool to support the removal of inhibitors. The CMO confirms the strong desire and effort towards innovation that is bringing results even if on a longer term. The action is in progress. Consensus is confirmed on the assessment 3.

Q7 - Population Approach – The stakeholders have a heterogeneous perception of this dimension. At the basis of the differences there is a different background, a different level and different amount of information, also resulting from the different type and duration of their professional experiences. The President of Voluntary Association believes that the information provided is not enough; hence assessment is 1 for this dimension. The CMO confirms that there is a considerable amount of data available, but that still need to be accessed in an integrated and coordinated way. The H&SC District Director shares the existence of population stratification data in some projects (e.g. citizens stratified per levels of fragility; citizens stratified per level of cardiovascular risk; citizens stratified per Multidisciplinary Evaluation Unit (UVM[26])). However, population stratification for the entire

[23] PPP stands for Public Private Partnership, as a management contract for public procurement, in which the building and operating stages are bundled.

[24] ERDF stands for European Regional Development Fund. More info are available at https://ec.europa.eu/regional_policy/en/funding/erdf/

[25] This project is currently under evaluation by the Regional HTA Centre to be scaled up. More info on Hospital@Home Project are available at https://www.scirocco-project.eu/p6-puglia-italy-telehomecare-telemonitoring-teleconsultation-and-telecare-project-aimed-at-patients-with-heart-failure-chronic-obstructive-pulmonary-diseases-and-diabetes/

[26] UVM stands for "Unità Valutazione Multidcisciplinare" and it is a health and social care tool that allows multi-professional teams to assess patients in relation to individual complex health and social care needs. More info

BR LHA does not exist. The CMO provides the example of the Regional Project "PASSI". He confirms the availability of population data, but not with a population stratification target. FG confirms the existence of data, which are gathered and available to the BR LHA, unfortunately not with a stratification scope. After an animated discussion, all the stakeholders reach consensus on 3 - *Risk stratification used for specific groups i.e. those who are at risk of becoming frequent service users*.

Q8 - Citizen Empowerment – Three out of five stakeholders agree on assessing this dimension 4 –*Incentives and tools exist to motivate and support citizens to co-create healthcare services and use these services to participate in decision-making process about their own health*. This assessment is confirmed by the other two.

Q9 - Evaluation Methods – Three out of five stakeholders agree on assessing this dimension 3 - *Some integrated care initiatives and services are evaluated as part of a systematic approach*. This assessment is confirmed by the other two.

Q10 - Breadth of Ambition – Three out of five stakeholders agree on assessing this dimension 4 - *Improved coordination of social care service and health care service needs is introduced*. This assessment is confirmed by the other two.

Q11 - Innovation Management – All stakeholders have heterogeneous perceptions on this dimension. In particular, the dichotomy between infrastructure and knowledge on the infrastructure is brought to evidence. The IT services Manager confirms that from a technological perspective the organisation ASL BR is fully supported by all the necessary technologies for implementing the innovation process. IT infrastructure exists. However, there is lack of information. Besides, there are people who put up well with technology and also encourage its use, while there are other people who have more resistance in up-taking new technologies. As a result, it becomes absolutely necessary to implement new procedures while eliminating the obsolete ones.

4.4.3 Final consensus

Figure Fig.9 depicts the final spider diagram with the final consensus of the five ASL BR designated stakeholders. The negotiation process highlighted elements of difference among the stakeholders, which were discussed and led to reaching consensus on almost all dimensions as were assessed by majority of the stakeholders. Exceptions have been recorded on dimensions Q3 and Q7, as evidenced by the spider diagram in figure Fig.9.

available at https://www.sanita.puglia.it/ricerca_det/-/journal_content/56/36057/uvm-unita-valutazione-multidisciplinare

Fig.9 – ASL BR final spider diagram

Table Tab. 6 summarises the final rating reached through the consensus building process that was presented earlier in this section. Justifications and reflections on each of the 12 dimensions have also been reported.

Dimension	Consensus	Justifications & Reflections
Q1 - Readiness to Change	3	Vision is clear to all stakeholders; however planning is on the way. Still some limits exist at the operational level.
Q2 - Structure & Governance	4	The roadmap is organised but different stakeholders have limited information on the various steps (e.g. stakeholders inside the organisation have different perception from stakeholders outside the organisation).
Q3 - Digital Infrastructure	4	e-Health services have been deployed, but there are limits to the use. This is due to the lack of/limited information that is circulated among the stakeholders at different levels.
Q4 - Process coordination	3	Information is very limited; hence the individual user does not take advantage of the existing standardised processes.
Q5 – Finance & Funding	3	Regional and National funding are available (e.g. ERDF[27]).
Q6 - Removal of inhibitors	3	Although existing, implementation processes are not yet evenly distributed.
Q7 - Population Approach	3	Risk stratification is used for specific groups, and in particular for those identified in the Chronic Care Model 3.0. Data are collected and available, but not always on stratification purpose.
Q8 - Citizen Empowerment	4	Strong consensus on this dimension.
Q9 - Evaluation Methods	3	Strong consensus on this dimension.
Q10 - Breadth of Ambition	4	Strong consensus on this dimension.
Q11 -Innovation Management	3	Formalised innovation management process is widely implemented: technological infrastructure is available, and up and running. However, there is some cultural resistance in place.
Q12 - Capacity Building	3	All stakeholders agreed on this dimension.

Tab. 6 -BR LHA summary of consensus meeting

4.5 Analysis of the outcomes – Brindisi Local Health Authority

Looking at the overall consensus diagram, dimension Q2 – Structure & Governance together with Q10 – Breadth of Ambition appear more significant than others in regards to carrying out integrated care in BR LHA, this because the approach towards the integrated care model

[27]ERDF stands for European Regional Development Fund. More info are available at https://ec.europa.eu/regional_policy/en/funding/erdf/

is enforced from the management of the organisation BR LHA. All the participants found the results of the survey compliant with the LHA's current situation.

None of the results were particularly surprising to the stakeholders.

The consensus diagram as a whole offers a balanced range across the 12th dimensions about the maturity of integrated care in the BR LHA, which is overall, assessed between the 3 and 4 points the reference scale 0 to 5. It is a harmonising image from a system-perspective and it does reflect the actual situation of the organisation at the time of the consensus workshop. Some dimensions are relevant to each other and they reinforce one the other. In particular, Q1 – Readiness to Change is supported by Q2 – Structure & Governance and Q10 – Breadth of Ambition.

A common factor among multiple dimensions is the strong Structure & Governance that is provide by the management team and transferred top-down. This works alongside with the bottom-up ambition to demonstrate to the other five Local Health Authorities (i.e. ASL) that the small size of BR LHA is not a limiting factor, quite the opposite is a facilitation element in achieving integrated care maturity.

Specific factors in the organisation BR LHA affect the recorded strengths and weaknesses. One specific factor in the organisation BR LHA positively impacts on the strengths: the small size of the organisation when compared to the other five in the Puglia Region. The factor that has negative impact on the weaknesses is the lack of cross-level information in the organisation. One of the above reported factors is dependent upon organisational aspects (i.e. size and information).

4.6 Key message – Brindisi Local Health Authority

Culture has emerged as relevant factor for an effective change and modernisation of the LHA integrated care model. As more information devises and e-health services will be available for citizens in the further months and years, is important to work on the resistance to change. The participants identified training and information as levers of change.

4.7 Conclusions – Brindisi Local Health Authority

After the negotiation and consensus building process on each of the 12th dimensions and the justifications provided by the five designated stakeholders on each of the 12th dimensions, the facilitators have asked final comments on the strengths of BR LHA in relation to the maturity of the integrated care model. The individual answers provided are below reported.

Chief Medical Officer> Q11 – Innovation Management. There is a strong desire to innovate as the scale of the organisation BR LHA is pretty small when compared to the other five organisations in Puglia Region.

President of Voluntary Association> Q1 – Readiness to Change. BR LHA is in a state of nearly continuous change as organisation, as this is demanded by the need, and particularly by the need to integrate between public and private to implement service provision.

H&SC District Director > Q2 – Structure & Governance and Q10 – Breadth of Ambition and Q11 - Innovation Management. Novel user needs have been acknowledged by the organisation management team. This has already led to a recognisable integration between professionals, and specifically between health and social care.

Nurse Coordinator > Q1 – Readiness to Change.

IT services Manager > Q11 – Innovation Management. Substantial investments have been also made.

Also, final comments on the weaknesses of BR LHA in relation to the maturity of the integrated care model have been invited. In this case, all the stakeholders agreed and unanimously confirmed that the greatest weakness of the organisation BR LHA was the lack of information and communication. The need for greater information access at all organisational levels is strongly envisaged.

As described in sections 4.3 and 4.4, the areas with highest differences are Q1 – Readiness to Change and Q7 – Population Approach. The strengths emerged across BR LHA, on which majority of the stakeholders agreed, are: Q1 - Readiness to Change; Q2 – Structure & Governance; Q10 – Breadth of Ambition; and Q11 – Innovation Management.

The outcomes reflected the local situations and the expectations of the stakeholders. The emerged challenge is the lack of information and how this poorly affects the integration of services across levels.

5 Self-assessment process – Barletta Andria Trani Local Health Authority

5.1 Introduction to Barletta Andria Trani Local Health

Barletta Andria Trani (BT) LHA comprises five Districts, three of which are closer to the coastline.

There are four acute care infrastructures, of which three are public, and one is private with public access via NHS agreement28.

In BT LHA there is a total of 285 GPs (without considering Paediatricians), of which 238 (i.e. 83.5%) are structured in complex networks to ensure seamless care delivery to patients29.

The population is 390,011 inhabitants30, with no significant difference reported between male and female population. People aged over 65 years old are 19% of entire population, of which almost half (i.e. 9%) is made by people aged over 75 years old. The spread of these two age groups is almost equal across the five Districts, with the Districts Andria and Barletta recording approximately 0.5% reduction in the figures31.

5.2 Identification process of the local stakeholders

AReSS Puglia requested to Barletta Andria Trani (BT from now on)LHA to identify five stakeholders with diverse background and different roles within the organisation, comprising: a representative of the Top Management (e.g. CEO, CMO, CAO); a representative of the Health & Social Care District; a representative with medical background (e.g. Care Manager, Chief Nurse); a patients' group representative; and a representative of the ICT Team .This allowed to gain multiple perspectives, in which the experience in each role and the affiliation to the local organisation where recorded to support the data analysis.

BT LHA identified five stakeholders as requested. The final list of the local stakeholders identified by BT LHA who completed the self-assessment process is reported in table Tab. 7 below, with years spent in the role and years spent in the organisation to contextualise their individual responses during the analysis.

[28]Source EDOTTO - regional health IT System
[29]Source EDOTTO - regional health IT System
[30]Source ISTAT 2018 data https://www.istat.it/it/dati-analisi-e-prodotti/contenuti-interattivi/popolazione-residente
[31]Piano della Performance 2019-2021 https://www.sanita.puglia.it/web/asl-barletta-andria-trani/piano-della-performance

Role	Affiliation	Years in role	Years in organisation
Chief Executive Officer	BT LHA	1.8	16
H&SC District Director	Andria H&SC District	22	31
Nurse Coordinator	BT LHA	2	13
Sick Patient Court Coordinator	-	NA	NA
IT services Manager	BT LHA	1	6

Tab. 7-BT LHA stakeholders

5.3 Self-assessment survey

Upon receiving the names and contact details of the five designated stakeholders by BT LHA, AReSS Puglia formally invited each of them via e-mail to take part to the maturity assessment process. All stakeholders were carbon-copied in the e-mails, so that they were all made aware of the fellow colleagues involved in the process.

In the e-mail the full process was described, the link to the SCIROCCO Exchange Tool was provided, together with a dedicated helpline. Supportive documents sent along with the invitation to complete the on-line survey comprised completion guidance with steps to follow, with visuals and screenshots to guide the entire process from beginning to completion and submission.

Two weeks' timeline was recommended for completion.

5.3.1 Outcomes of self-assessment survey

All the five invited stakeholders completed the on-line self-assessment survey on time. TableTab. 8Tab. 9 - BT LHAprovides a summary of the 0 to 5 ratings provided by the stakeholders on each of the 12 dimensions of the SCIROCCO Exchange Tool. The ratings assigned by each stakeholder vary in all the dimensions. The degree of variation is from 1 to 3 for the dimensions: Q1, Q2, Q5, and Q12. It is from 2 to 4 for the dimensions: Q3, and Q7. It is higher than three points on the 0 to 5 scale for the dimensions: Q4, Q9, Q10, and Q11. It is lower than three points on the 0 to 5 scale for the dimensions Q6 and Q8, where the variation is only of two points on the scale (i.e. 0 to 1 and 1 to 2).

The stakeholders have been working in BT LHA for individual periods that vary from 6 to 31 years and have been providing services in their roles for periods of time that varies from 1 to 22 years. Their individual perceptions on each of the 12 dimensions of the SCIROCCO Exchange tool precisely reflect the knowledge that they individually have on the dimensions.

The dimensions on which majority of the stakeholders appeared to have a closer perception are: Q5 "Funding", Q6 "Removal of Inhibitors", and Q12 "Capacity Building". While for the dimensions Q5 and Q6 the perception is rated low (in red), the dimension Q12 is on the middle range (in yellow) of the scale.

Figure Fig.10 depicts the outcomes of the on-line individual self-assessment, as completed by each BR LHA stakeholder.

	Tool Dimensions											
Stakeolder Role	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Chief Exectuive Officer	3	3	2	3	1	1	4	1	2	2	4	3
H&SC District Director	3	2	4	4	1	0	4	1	4	4	3	3
Nurse Coordinator	3	1	2	3	1	1	4	2	4	4	3	3
Scik Patient Court Coordinator	1	1	4	0	1	1	2	2	2	0	3	3
IT services Manager	1	1	2	2	3	1	4	1	1	2	1	1

Dimensions			
Q1	Readiness to Change	Q7	Population Approach
Q2	Structure & Governance	Q8	Citizen Empowerment
Q3	Digital Infrastructure	Q9	Evaluation Methods
Q4	Process Coordination	Q10	Breadth of Ambition
Q5	Finance & Funding	Q11	Innovation Management
Q6	Removal of Inhibitors	Q12	Capacity Building

Ratings		
5 to 4	3 to 2	1 to 0

Tab. 8 - BT LHA summary of self-assessment

Chief Medical Officer

H&SC District Director

Nurse Coordinator

IT services Manager

Sick Patient Court Coordinator

Fig.10 - BT LHA outcomes of the individual self-assessments

5.3.2 Stakeholder workshop

Upon completion of the self-assessment survey by all the five designated stakeholders of BT LHA, an invitation letter was sent by AReSS Puglia to the LHA via e-mail, to request a feasible date to organise a half-day meeting, comprising a two-hours workshop, followed by a 30 to 45 minutes focus group with all the stakeholders on their experience with the SCIROCCO Exchange Tool.

The stakeholders identified Thursday 26th September as the best option for attending the workshop, which was delivered to them on-site at the General Direction Office BT LHA in Andria. The session required internet connection and projection facilities.

The purpose of the workshop, which was facilitated by Dr. Mingolla and Dr. Pantzartzis in Italian language, was to: present the assessment process in the Puglia Region; present the initial outcomes of the on-line self-assessment; discuss on the assessments of each dimension; and reach a consensus on the maturity of integrated care in BT LHA.

Fig.11 -BT LHA consensus workshop

5.3.3 Negotiation and consensus building

After the presentation, with the support of a PowerPoint presentation and hand-outs, of the summary of the on-line self-assessment survey, the invited stakeholders were guided through the negotiation process with a PowerPoint presentations and visuals. The purpose of the negotiation process was to: 1) share the multiple perceptions that guided each stakeholder during the self-assessment, including their experience in the Local Health Authority and in their specific roles; and 2) identify the chance to negotiate a shared ranking for each dimension, upon knowledge and information sharing during the workshop.

The negotiation and consensus building process was delivered through an in depth analysis of each dimension of the SCIROCCO Exchange Tool, presenting and discussing the justifications and reflections that each stakeholder has provided in their on-line self-assessment. The process began starting from the three dimensions on which the smallest variations were captured. In particular, dimension Q6 on which all stakeholders unanimously agreed since the self-assessment; and dimensions Q5 and Q12 on which little rating variations were recorded. Each dimension is reported below.

Q6 – Removal of Inhibitors –Almost all stakeholders (i.e. four out of five) agree on assessing this dimension 1 – *Awareness of inhibitors but no systematic approach to their management is in place,* as inhibitors are perceived and identified. Nevertheless, there is not a systematic plan in place for removal, nor reduction. The H&SC District Director has no perception of the existence of inhibitors, hence the "0" rating reported. Consensus is confirmed on the assessment 1.

Q5 – Finance &Funding – Four out of five stakeholders agree on assessing this dimension 1 - *Funding is available but mainly for the pilot projects and testing*. The CEO explains how project funding exists and enables the delivery of projects. Nonetheless, it is absolutely crucial that the LHA Top Management leads the action. The CEO suggests that a bottom-up approach should be also exerted to enable optimum identification of funding availabilities, hence promotion across all levels and not only top-down. Currently there is an unmet condition between need and offer. Consensus is confirmed on 1.

Q12 – Capacity Building – Four out of five stakeholders agree on assessing this dimension 3 – *Learning about integrated care and change management is in place but not widely implemented*. All stakeholders agree on the lack of continuous training, which deeply impacts on capacity building. The IT services Manager who has rated "1" this dimension stated that most of the times continuous training is not identified among the needs of the organisation. The stakeholders agree on "3".

Q1 – Readiness to Change -The stakeholders have split perceptions of this dimension. While three out of five rate 3 -*Vision or plan embedded in policy; leaders and champions emerging*, the remaining two stakeholders rate this dimension 1 -*Compelling need is recognised, but no clear vision or strategic plan.* Despite the different rating, all stakeholders converge on relating the relentless of strategies and directions at Regional level, which make it highly complex to deliver the change. After the discussion, all stakeholders agree to converge on 3.

Q2 - Structure & Governance – Three out of five stakeholders rated this dimension 1 - *Recognition of the need for structural and governance change*, as formal and structured action still needs to be taken towards the delivery of integrated care. After discussion, informal ways of collaboration are acknowledged, but there is a lack of awareness of the processes in place. The CEO suggests that once the issues are brought to evidence, half of the effort is already done. As a consequence, all the stakeholders agree on rating 2 - *Formation of task forces, alliances and other informal ways of collaborating*.

Q3 - Digital Infrastructure - The perception that all five stakeholders have on this dimension is positive, with ratings split between "2" and "4". Digital infrastructure services have been implemented over the past years (e.g. Edotto), although work still needs to be completed towards a full e-health system of care delivery. After discussion, they all converge on 3 - *eHealth services to support integrated care are piloted but there is not yet region wide coverage*.

Q4 - Process Coordination – The stakeholders have a heterogeneous perception of this dimension. Ratings vary from "0" to "4", with two out of five rating 3 -*A recommended set of agreed technical standards at regional/national level; some shared procurements of new systems at regional/national level; some large-scale consolidations of ICT underway*. In particular, the two stakeholders make reference to the Care pathway as being one of the enablers of integrated care. After discussion and sharing information, they converge on rating 4 -*A unified set of agreed standards to be used for system implementations specified in procurement documents; many shared procurements of new systems; consolidated data centres and shared services widely deployed*.

Q7 - Population Approach – The stakeholders have a homogeneous perception of this dimension, with four out of five rating 4 -*A population risk approach is applied to integrated care services but not yet systematically or to the full population*. The population risk approach is mostly applied to specific types of integrated care services, and uttermost to chronic patients. Consensus is confirmed on the assessment 4.

Q8 - Citizen Empowerment – The assessment of this dimension is towards the lower side of the scale (i.e. "1" and "2"). Issues on communication and knowledge sharing are brought to evidence during the discussion. Specific reference is made to the fragmentation of the available information and to the concentration of the available information (e.g. therapies, pathways) in the hands of a few trained stakeholders. Consensus is confirmed on the assessment 2, as on-site specific efforts are currently done.

Q9 - Evaluation Methods – The stakeholders have a heterogeneous perception of this dimension. Ratings vary from "1" to "4", with two out of five rating 4 -*Most integrated care initiatives are subject to a systematic approach to evaluation; published results*. After discussion, stakeholders converge on rating 2 -*Evaluation of integrated care services exists, but not as a part of a systematic approach,* as there is no reporting on the amount and details of data collected.

Q10 - Breadth of Ambition – The stakeholders have a heterogeneous perception of this dimension. Ratings vary from "0" to "4", with two out of five rating 4-*Improved coordination*

of social care service and health care service needs is introduced. Consensus is confirmed on the assessment 4.

Q11 – Innovation Management – Three out of five stakeholders rate this dimension 3 - *Formalised innovation management process is planned and partially implemented*, with one stakeholder rating at the lowest end of the scale (i.e. "0") and one another stakeholder rating towards the highest end ("4"). This variation is dependent upon the experience (i.e. the years within the organisation BT LHA, and the role that each stakeholder has (i.e. the CEO has rated "4", while the IT Services Manager has rated "1"). After discussion, consensus is reached on 3.

5.3.4 Final consensus

Figure Fig.12 illustrates the final spider diagram with the final consensus of the five BT LHA designated stakeholders. The negotiation process highlighted elements of difference among the stakeholders, in contrast to the dimensions on which they initially have revealed alike perceptions, which were discussed in detail and led to reaching consensus on almost all dimensions as were assessed by majority of the stakeholders. The discussion led to the almost unanimous rating on the dimensions Q5, Q6, Q7, Q8, and Q11, as evidenced by the spider diagram in figure Fig.12.

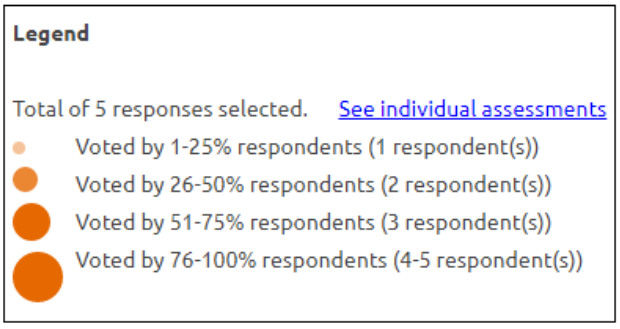

Fig.12 – BT LHA final spider diagram

Table Tab. 9contains the final scores reached through the consensus building process that were summarised earlier on. Justifications and reflections on each of the 12 dimensions are also reported.

Dimension	Consensus	Justifications & Reflections
Q1 - Readiness to Change	3	Plans are defined at organizational level. Nonetheless, there are processes and regulations at regional (i.e. Puglia) level that the organization needs to fulfill. This affects the readiness to change.
Q2 - Structure & Governance	2	Informal ways of collaboration are acknowledged, but there is a lack of awareness of the processes in place. This results in informal actions and alliances to deliver the best possible solution to the issues.
Q3 - Digital Infrastructure	3	There is only one regional (i.e. Puglia) system that is the electronic patient record (i.e. EHR). Other than this, e-health services to support integrated care do exist but lack comprehensive organisation.
Q4 – Process coordination	4	Care pathways will lead to simplification of processes for service deployment.
Q5 – Finance & Funding	1	Funding is only used for pilot projects, less for training and information. The outcome is the incapability to be ready to identify the available funding unless this action is led from above. Training and information at different levels is required, in order to enable a systematic process. There are multiple sets of evaluations of integrated care services, done through multiple ICT platforms. Training, information and integration are needed.
Q6 - Removal of inhibitors	1	The assessment is due to the lack of perception of inhibitors by some stakeholders, but not all of them.
Q7 - Population Approach	4	Population risk approach is applied to integrated care services but it has not yet been systematically implemented.
Q8 - Citizen Empowerment	2	Citizen empowerment is acknowledged as having a strong impact on successful delivery of integrated care. However, the process is strongly affected by the efforts done on-site (e.g. Chronic Care Model).
Q9 - Evaluation Methods	2	Evaluation actions related to integrated care services are currently higher than those that are actually fully used. Stakeholders underlined that there is no reporting on the amount and details of data collected.
Q10 - Breadth of Ambition	4	Integration between health and social care services is mostly done across different areas of care. This is envisaged across different levels of the same area or service.
Q11 -Innovation Management	3	The assessment of innovation management processes is directly linked to and dependent upon the experience of the individual stakeholder and the years spent in their specific role.
Q12 - Capacity Building	3	Training is perceived as not enough implemented and is not part of “continuous learning”.

Tab. 9 – BT LHA summary of consensus meeting

5.4 Analysis of the outcomes – Barletta Andria Trani Local Health Authority

Looking at the final consensus diagram, three dimensions appear more significant than others in regards to carrying out integrated care in BT LHA: Q4 – Process Coordination; Q7- Population Approach; and Q10 – Breadth of Ambition. None of the results were particularly surprising to the stakeholders. Multiple efforts are in place to deliver integrated care services, with coordinated processes, population risk approach, and a strong ambition. Nevertheless, funding availability and removal of inhibitors still pose a limit to the achievement of a fully integrated care service delivery in the organisation.

The consensus diagram as a whole describes BT LHA regional maturity in terms of integrated care as a complex balance of elements, ranging from "1" to "4" points rating on the reference scale 0 to of integrated care 5.

A connection emerged for the dimensions Q6 – Removal of Inhibitors and Q8 – Citizen Empowerment, as the effects of inhibitors are not always perceived at all levels, by all stakeholders. This difference in perception of the inhibitors directly impacts on how the citizens are empowered: if stakeholders do not perceive the existence of inhibitors, they will not act to empower the citizens. This process is positive affected by the efforts done on-site (e.g. Chronic Care Model).

A common factor that affects multiple dimensions is the complexity of the management processes, which require a degree of literacy and dedicated efforts to be effective. Training is not yet part of a routine management process, as so it requires extra efforts to be delivered. Structure & Governance is mostly provided in an informal way, which then poses some limits in the implementation processes.

Among the specific factors that affect strengths and weaknesses in the Integrated Care organisation in BT LHA, there is lack of integration amongst the different levels of care and the different stakeholders. Nevertheless, this is currently emerging as an issue, which already provides the basis to initiate the change. This factor is mostly dependent upon organisational aspects, rather than others. The LHA is extremely innovative in its approach; nonetheless it is highly linked to the Regional (i.e. Puglia Region) structured approach.

5.5 Key message – Barletta Andria Trani Local Health Authority

All the participants stated that the assessment with the tool is very important to analyse data and translate them in corrective action in a faster way. The dialog among different stakeholders was the most appreciated factor. The H&SC District Director: "it's important that the assessment results lead to systemic management of chronicity pathways".

5.6 Conclusions – Barletta Andria Trani Local Health Authority

After the negotiation and consensus building process on each of the 12th dimensions and the justifications provided by the five designated stakeholders on each of the 12th dimensions, the facilitators have asked final comments on the strengths of BT LHA in relation to the maturity of the integrated care model. The participants strongly agreed on the outcomes of

the consensus building activity, and on the justifications provided during the self-assessment stage. Undoubtedly BT LHA declared its strong determination in achieving full change at local level and to enable each stakeholder at the different staged of the process to deliver integrated care to Barletta Andria Trani citizens.

As described in sections 5.3 and 5.4, the dimensions with highest differences are: Q4 – Process coordination; Q9 - Evaluation Methods; Q10 - Breadth of Ambition; and Q11 - Innovation Management. Among those dimensions all the stakeholders provided ratings varying from “0” to “4”, with justifications mostly related to the lack of integration across different services but from each stakeholder’s perspective. Funding and Removal of inhibitors emerged as weaknesses, while Population approach emerged as major strength across the LHA at all levels.

The outcomes reflected the local situations and the expectations of the stakeholders. The emerged challenge is the lack of integration of services across levels.

6 Self-assessment process – Foggia Local Health Authority

6.1 Introduction to Foggia Local Health

Foggia LHA covers a fragmented territory comprising a total of 61 municipalities, which are organised in three dis-homogeneous areas due to geographical configurations and infrastructure networks. There are mountains (i.e. Dauni Mountains) and islands (i.e. Tremiti Islands) that provide physical constraints; as well as variations in the connection through seven railway lines, two motorways, and eight A roads. Tremiti Islands and at least 11 municipalities are located more than 60 minutes away from the nearest hospital. The LHA comprises eight H&SC Districts.

There are 10 acute care infrastructures, of which four are public (comprising one university hospital), and six are private with public access via NHS agreement (comprising one religious institution)[32].

In FG LHA there is a total of 323 GPs (without considering Paediatricians), of which 227 (i.e. 70.3%) are structured in complex networks to ensure seamless care delivery to patients[33].

The 622,183 inhabitants[34]are mostly concentrated in urban areas (60%), whereas the rural areas are in a state of isolation and low density. The 20% of the population is over 65 years old, where 6% is the amount of people aged 80 years and above. Only 15% of the population is between 0 and 14 years old. The concentration of the population aged over 65 years reflects the concentration of the population aged over 40 years, which is reported being in the urban areas rather than in rural areas. People aged over 65 years and over 75 years have been progressively increasing over time: the increment between 1982 and 2007 has respectively been reported at +32% and +135%[35].

Foggia Province currently has a population affected by chronic diseases 3.5% lower than the regional average (i.e. Puglia Region). Nevertheless, the rate of hospitalisation in Foggia LHA is much higher when compared to the regional average. Chronic diseases represent a strong limit to the sustainability of care services. The top four diseases are listed in relation to the highest number of patients with chronic diseases: diabetes; hypertension; cardiac deficiency; and chronic obstructive pulmonary disease (COPD)[36].

[32]Source EDOTTO - regional health IT System
[33]Source EDOTTO - regional health IT System
[34]Source ISTAT 2018 data https://www.istat.it/it/dati-analisi-e-prodotti/contenuti-interattivi/popolazione-residente
[35]Piano della Performance 2019-2021 https://www.sanita.puglia.it/web/ospedaliriunitifoggia/piano-della-performance
[36]Piano della Performance 2019-2021 https://www.sanita.puglia.it/web/ospedaliriunitifoggia/piano-della-performance

6.2 Identification process of the local stakeholders

AReSS Puglia asked Foggia LHA Top Management to appoint a minimum of five stakeholders to gather different assessment perspectives concerning the 12 maturity matrix dimensions and to obtain a multi-stakeholder opinion on integrated care local initiatives. AReSS Puglia specified the different roles within which to identify the assessors comprising: a representative of the Top Management (e.g. CEO, CMO, CAO); a representative of the Health & Social Care District; d; a representative with medical background (e.g. Care Manager, Chief Nurse); a patients' group representative; and a representative of the ICT Team. Experience in each role and the affiliation to the local organisation where recorded to support the data analysis.

Foggia LHA identified five stakeholders as requested, to which other one was later added as she had a role that could provide additional input to the identified stakeholders (i.e. Social Services Coordinator). The final list of the local stakeholders identified by Foggia LHA who completed the self-assessment process is reported in table Tab. 10 below, with years spent in the role and years spent in the organisation to contextualise their individual responses during the analysis.

Role	Affiliation	Years in role	Years in organisation
Chief Executive Officer	FG LHA	NA	NA
Social Services Coordinator	FG LHA	28	28
H&SC District Director	San Marco in Lamis H&SC District	14	29
Nurse Coordinator	San Marco in Lamis CCC	20	30
ICT services Manager	FG LHA	2	10
President of Patient's Association	Patient Advisory Committee	10	10

Tab. 10-FG LHA stakeholders

6.3 Self-assessment survey

Upon receiving the names and contact details of the six designated stakeholders by Foggia LHA, AReSS Puglia formally invited each of them via e-mail to take part to the maturity assessment process. All stakeholders were carbon-copied in the e-mails, so that they were all made aware of the fellow colleagues involved in the process.

In the e-mail the full process was described, the link to the SCIROCCO Exchange Tool was provided, together with a dedicated helpline. Supportive documents were sent along with the invitation to complete the on-line survey comprised completion guidance with steps to follow, with visuals and screenshots to guide the entire process from beginning to completion and submission.

Two weeks' timeline was allowed for completion, which was eventually extended because of holiday season in Puglia. The SCIROCCO Exchange project team supported the completion of the on-line survey

6.3.1 Outcomes of self-assessment survey

All the six invited stakeholders completed the on-line self-assessment survey on time. Table Tab. 11 provides a summary of the 0 to 5 ratings provided by the seven stakeholders on each of the 12 dimensions of the SCIROCCO Exchange Tool. The ratings assigned by each stakeholder vary from 1 to 4, with only two dimensions in which the ratings reached 5: Q1 and Q12.

The stakeholders, who have been working in Foggia LHA for individual periods that vary from 10 to 30 years and who have been providing services in their roles for periods of time that vary from 2 to 28 years, have provided a pretty homogeneous perception of the 12 dimensions of the SCIROCCO Exchange Tool, as far as they are concerned.

The dimensions on which majority of the stakeholders appeared to have different perception are: Q1 "Readiness to Change", Q4 "Process Coordination", andQ5 "Funding". They all unanimously agree on dimension Q7 "Population Approach", which returns a very positive rating (in green), quite in contrast with Q4 (in red and yellow).

Figure Fig.13 depicts the outcomes of the on-line individual self-assessment, as completed by each FG LHA stakeholder.

	Tool Dimensions											
Stakeholder Role	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Chief Executive Officer	3	2	3	2	3	1	4	2	1	3	3	3
H&SC District Director	3	1	3	1	3	2	4	2	2	2	3	2
Nurse Coordinator	3	1	3	1	3	2	4	2	2	2	3	2
ICT services Manager	4	2	3	1	1	1	4	3	2	2	1	2
President of Patient's Association	5	1	4	3	1	2	4	1	2	1	2	5

Dimensions			
Q1	Readiness to Change	Q7	Population Approach
Q2	Structure & Governance	Q8	Citizen Empowerment
Q3	Digital Infrastructure	Q9	Evaluation Methods
Q4	Process Coordination	Q10	Breadth of Ambition
Q5	Finance & Funding	Q11	Innovation Management
Q6	Removal of Inhibitors	Q12	Capacity Building

Ratings		
5 to 4	3 to 2	1 to 0

Tab. 11 - FG LHA summary of self-assessment

Chief Executive Officer

H&SC District Director

Nurse Coordinator

IT services Manager

President of Patient's Association

Fig.13 – FG LHA outcomes of the individual self-assessments

6.3.2 Stakeholder workshop

Upon completion of the self-assessment survey by all the six designated stakeholders of Foggia LHA, an invitation letter was sent by AReSS Puglia to the LHA via e-mail, to request a feasible date to organise a half-day meeting, comprising a two-hours workshop, followed by a 30 to 45 minutes focus group with all the stakeholders on their experience with the SCIROCCO Exchange Tool.

The stakeholders identified Thursday14thNovember as the best option for attending the workshop, which was delivered to them on-site at the General Direction Office FG LHA in Foggia.

The purpose of the workshop, which was facilitated by Dr. Mingolla and Dr. Pantzartzis in Italian language, was to: present the assessment process in the Puglia Region; present the initial outcomes of the on-line self-assessment; discuss on the assessments of each dimension; and reach a consensus on the maturity of integrated care in Foggia LHA.

Fig.14 -FG LHA consensus workshop

6.3.3 Negotiation and consensus building

After the presentation, with the support of a PowerPoint presentation and hand-outs of the summary of the on-line self-assessment survey, the invited stakeholders were guided through the negotiation process with a PowerPoint presentations and visuals. The purpose of the negotiation process was to: 1) share the multiple perceptions that guided each stakeholder during the self-assessment, including their experience in the Local Health Authority and in their specific roles; and 2) identify the chance to negotiate a shared ranking for each dimension, upon knowledge and information sharing during the workshop.

The negotiation and consensus building process was delivered through an in depth analysis of each dimension of the SCIROCCO Exchange Tool, presenting and discussing the justifications and reflections that each stakeholder has provided in their on-line self-assessment. All the dimensions were discussed in numerical order, as below reported.

Q1 – Readiness to Change -The stakeholders have a positive perception on this dimension, whose ratings are towards the higher end of the scale (i.e. from “3” to “5”). The President

of the Patient's Association confirmed his 5 -Political consensus; public support; visible stakeholder engagement, while the other stakeholders express less strong certainties on the political consensus and suggest that implementation to keep the momentum towards the change is still needed. After discussion, the stakeholders agree on assessing this dimension 4 – *Leadership, vision and plan clear to the general public; pressure for change*.

Q2 - Structure & Governance – Three out of five stakeholders rate this dimension 1 - *Recognition of the need for structural and governance change*. The other two rated 2- *Formation of task forces, alliances and other informal ways of collaborating*. Structure and governance are present al local level (i.e. organisation FG LHA); nevertheless, there is the perception that they are missing at national and regional level. Consensus is reached on "2".

Q3 - Digital Infrastructure - The stakeholders have a homogeneous and positive perception of this dimension, as four out of five rated 3 -*eHealth services to support integrated care are piloted but there is not yet region wide coverage*. The President of the Patients' Association is convinced that a supportive network and knowledge transfer is key, as not all the stakeholders nor the citizens may have access to the same infrastructure (i.e. Sub-Appennino and Gargano have no full infrastructure network) and have the same level of literacy. Consensus is reached on "3".

Q4 - Process Coordination – Three out of five stakeholders rate this dimension 1 -*Discussion of the necessity of ICT to support integrated care and of any standards associated with that ICT is initiated,* while the other two rated "2" *and "3"*. The President of the Patients' Association explains that there is no standardised approach, while the Nurse Coordinator finds this lack especially at the top of the organisational pyramid. There are efforts towards process coordination at local level, but these need to be reported at organisational (i.e. FG LHA) level. After evaluating the current situation, the stakeholders agree on assessing this dimension 2 -*An ICT infrastructure to support integrated care has been agreed together with a recommended set of technical standards - there may still be local variations or some systems in place are not yet standardised*.

Q5 - Finance &Funding – Three out of five stakeholders agree on assessing this dimension"3" while the other two "1". The different roles of the stakeholders plays a crucial part in the rating of this dimension, as not all of them have knowledge on the different types of funding, that is accessed through different procedures. The stakeholders reach consensus on 3 - *Regional/national (or European) funding or PPP for scaling-up is available,* as they all acknowledge the existence of funding for scaling-up.

Q6 - Removal of Inhibitors –Also on this dimension, the stakeholders have split views. Two out of three have negative perception, while three have a more positive opinion, even if not fully positive. In particular, they all acknowledge different levels of literacy and cultural inhibitors. Consensus is reached on 1 -*Awareness of inhibitors but no systematic approach to their management is in place*.

Q7 - Population Approach – The stakeholders have a unanimous and positive perception of this dimension. They all agree on rating the dimension 4 – *A population risk approach is applied to integrated care services but not yet systematically or to the full population.*

Q8 - Citizen Empowerment – Three out of five stakeholders rated this dimension 2 -*Citizen empowerment is recognised as important part of integrated care provision, effective policies to support citizen empowerment are in place but citizens do not have access to health information and health data.* The Nurse Coordinator stated that citizens are empowered at the point that the information is directly accessed by the citizens. However, after discussion, in which the ICT services Manager substantiated the relevance of the electronic patient's records (i.e. EHR), all stakeholders converged on rating 3 -*Citizens are consulted on integrated care services and have access to health information and health data.*

Q9 - Evaluation Methods – Four out of five stakeholders rated this dimension 2 -*Evaluation of integrated care services exists, but not as a part of a systematic approach.* Though, after discussion, the lack of integrated care services and the lack of evaluation methods within the integrated care service delivery were brought to the attention. Hence, they all agreed to converge on rating 1 -*Evaluation of integrated care services is planned to take place and be established as part of a systematic approach.*

Q10 - Breadth of Ambition – Three out of five stakeholders rated this dimension 2 -*Integration within the same level of care (e.g., primary care) is achieved,* while the other two rated it "1" and "3". The President of the Patient's Association is extremely critical on the inability to achieve a full coverage across the entire network so that to offer full integrated care services to the citizens. He identifies some gaps, among which the absence of a key stakeholder (i.e. GP) despite a wide and evident individual disposition to collaborate among professions. The discussion brings to evidence different perceptions, much wider that only one-point on the rating scale (and the definitions associated to them). Reaching full consensus requires higher effort than for the other dimensions and yet, the rating 1 -*The citizen or their family may need to act as the integrator of service in an unpredictable way* cannot be considered fully accepted by all the five stakeholders as representative of FG LHA.

Q11 - Innovation Management – Three out of five stakeholders rated this dimension 3 -*Formalised innovation management process is planned and partially implemented,* while the other two rated it "1" and "2". The ICT services Manager is highly critical on the lack of human and economic resources to enable innovation management, hence his rating 1 -*Innovation is encouraged but there is no overall plan.* This is the dimension on which the highest level of disagreement has been captured and recorded. The discussion brings to evidence different perceptions, much wider that only one-point on the rating scale (and the definitions associated to them). Reaching full consensus requires higher effort than for the other dimensions, hence the rating 2 - *Innovations are captured and there are some mechanisms in place to encourage knowledge transfer* is the most acceptable compromise among the stakeholders.

Q12 - Capacity Building – Three out of five stakeholders rated this dimension 2 -*Cooperation on capacity building for integrated care is growing across the region.* All stakeholders agree on recognising that there are multiple on-going efforts to implement capacity building, despite a lot still needs to be done. The rating 2 is confirmed.

6.3.4 Final consensus

Figure Fig.15 illustrates the final spider diagram with the final consensus of the six Foggia LHA designated stakeholders. The negotiation process highlighted elements of difference among the stakeholders, which were discussed and led to reaching consensus on almost all dimensions. The final consensus diagram as depicted in figure Fig.15 shows how the consensus has not always been reached on the score on which majority of the stakeholders individually assessed each specific dimension. This is particularly evident on the dimensions Q1, Q8, Q9, Q10, and Q11 and proves how the discussion led to a deeper understanding of each dimension and the elements that may be relevant to it.

Fig.15 – FG LHA final spider diagram

Table Tab. 12contains the final scores reached through the consensus building process that were summarised earlier on. Justifications and reflections on each of the 12 dimensions have been reported.

Dimension	Consensus	Justifications & Reflections
Q1 - Readiness to Change	4	The organisation is ready, but implementation is needed to keep the momentum towards the change. There is a strong dialogue on-going and leaders, but more actions need to be undertaken. Dialogue and vision need to be implemented.
Q2 - Structure & Governance	2	The level of maturity is still growing, so that "3" is not yet an appropriate rating on the provided scale.
Q3 - Digital Infrastructure	3	All the digital infrastructure has been re-done. The software infrastructure needs still implementation.
Q4 – Process coordination	2	There are guidelines for some care processes but they need to be implemented for multiple care pathways as they may be only defined for a few (e.g. diabetes and cardiac deficiency).
Q5 – Finance & Funding	3	The rating "1" were given only on the basis of funds dedicated to pilot projects. However, national funds have been identified to scale-up the integrated care.
Q6 - Removal of inhibitors	1	There are currently no strategies in place.
Q7 - Population Approach	4	All stakeholders strongly agree.
Q8 - Citizen Empowerment	3	Citizens have access to data and information on their health, but they are not always invited to participate and contribute in a systematic way to integrated care services.
Q9 - Evaluation Methods	1	The methodology and tools are under planning.
Q10 - Breadth of Ambition	1	Individual disposition to collaborate towards integration and systematic process. However, there is a strong difference between the overall organisation FG LHA and the San Marco in Lamis H&SC District (e.g. caregivers have access to patients' digital records).
Q11 -Innovation Management	2	The innovation process has been initiated. The IT infrastructure, intranet and the training have been completed with selected groups of stakeholders. Nevertheless, some resistance is recorded.
Q12 - Capacity Building	2	There are multiple on-going efforts to implement capacity building.

Tab. 12 – FG LHA summary of consensus meeting

6.4 Analysis of the outcomes – Foggia Local Health Authority

Looking at the final consensus diagram, there are some dimensions that noticeably appear more significant than others in regards to carrying out integrated care in FG LHA, and this especially in comparison to others that have resulted in a much lower rating. Dimensions Q1

– Readiness to Change and Q7 – Population Approach are more dominant than others. None of the results were particularly surprising to the stakeholders.

The consensus diagram as a whole picture of the regional maturity in terms of integrated care in FG LHA highlights some elements of strength, but also some elements that still need to be implemented through Foggia province and all the H&SC districts, including those that are more secluded because of the geographical morphology of the territory. From a system-perspective the returned image is not fully harmonised, but the driving factor is related to the morphological configuration of the territory, as already stated at the beginning of this section, which determines inevitable fragmentation in the delivery of integrated care, which precisely reflects the actual situation of the organisation.

Furthermore, it needs to be acknowledged the evident variations in the scores provided at the individual on-line self-assessment from those agreed during the consensus workshop. This is a fair reflection of the changes happened throughout the two and a half-month period between the two activities, which were captured and reported during the consensus workshop.

A common factor among multiple dimensions is the strong participation from every stakeholder at each individual level, which then results in a domino effect. However, this can be noticed both on the highest (i.e. Q1 and Q7) and on the lowest (i.e. Q6, Q9, and Q10) sides of the scale. On a side there is a mutual collaboration, while on the other side there is a lack of methodology in delivering the results.

Specific factors in the organisation FG LHA affect the recorded strengths and weaknesses. One specific factor in the organisation FG LHA affects the strengths: the uneven distribution across the territory gives real power to population approach, sharing and participation of the vision is in place. The factor that deeply affects the weaknesses is the lack of training across the organisation, but somehow still related to the morphology of the territory. The scattered distribution of 61 municipalities across the territory creates a strong barrier to the change, but the digital infrastructure network implementation as above recorded shall mitigate it.

6.5 Key message – Foggia Local Health Authority

All the participants agreed that they have learned something thanks to the self-assessment process. The LHA should apply on a large scale its good practices and follow up with the citizens' participation in the process.

6.6 Conclusions – Foggia Local Health Authority

After the negotiation and consensus building process on each of the 12th dimensions and the justifications provided by the five designated stakeholders on each of the 12th dimensions, the facilitators have asked final comments on the strengths of FG LHA in relation to the maturity of the integrated care model. It was captured the evident variation between the moment of completion of the on-line self-assessment and the time of the consensus

workshop. Therefore, ratings have been amended accordingly and justified as reported in table Tab. 12.

The stakeholders jointly agreed to suggest strengths and weaknesses as below reported.

The main recorded strength is Q7 – Population Approach. This is also supported by sharing and collaboration at multiple levels, strongly driven by FG LHA Direction. Nevertheless, despite a strong vision, the plan is not yet implemented, hence a methodology needs to be shared among multiple levels to finalise the change.

The main recorded weakness is Training, which is key to dissolve the resistance to change that still exists in places. What emerged, both individually and jointly, is the morphological configuration, hence geographical distribution across the territory, hence much needed resources to reach the mountains and the islands within the integrated care service delivery system.

The outcomes precisely reflected the local situations and the expectations of the stakeholders. The emerged challenge is the uneven distribution across the territory and the physical constraints, which require stronger and diverse efforts to deliver integrated care services.

7 Self-assessment process – Lecce Local Health Authority

7.1 Introduction to Lecce Local Health

Lecce LHA covers a fragmented territory comprising a total of 97 municipalities, which are organised in 10 H&SC Districts, geographically spread in a non-homogeneous way.

The demographic distribution of the 795,134 inhabitants37brings to evidence the existence of small communities, in which majority of the population resides: almost 70% of the entire population lives in 88 municipalities that can count on less than 15,000 inhabitants.

There are 13 acute care infrastructures, of which six are public, and seven are private with public access via NHS agreement (comprising one religious institution)[38].

In LE LHA there is a total of 654 GPs (without considering Paediatricians), of which 415 (i.e. 63.4%) are structured in complex networks to ensure seamless care delivery to patients[39].

People aged over 65 years old are 23.6% of the entire population at 2018 ISTAT data, of which 11.93% are people aged over 75 years old. The increase since the 1998 data is approximately of 5% for both age groups, with a reducing figure for the overall population. The increase of these age groups has led to an increase of the resources, and specifically 80% increase for a 40% incidence of citizens with chronic diseases40.

7.2 Identification process of the local stakeholders

AReSS Puglia asked Lecce LHA Top Management to appoint a minimum of five stakeholders to gather different assessment perspectives concerning the 12 maturity matrix dimensions and to obtain a multi-stakeholder opinion on integrated care local initiatives. AReSS Puglia specified the different roles within which to identify the assessors comprising: a representative of the Top Management (e.g. CEO, CMO, CAO); a representative of the Health & Social Care District; d; a representative with medical background (e.g. Care Manager, Chief Nurse); a representative of the ICT Team; and a patients' group representative. Experience in each role and the affiliation to the local organisation where recorded to support the data analysis.

Lecce LHA identified five stakeholders as requested, to which one additional was later added, as she had previously taken part to SCIROCCO Project, so to provide additional expertise within the role of "patients' group representative". The final list of the local stakeholders identified by Lecce LHA who completed the self-assessment process is reported in table Tab. 13 below, with years spent in the role and years spent in the organisation to contextualise their individual responses during the analysis.

[37]Source ISTAT 2018 data https://www.istat.it/it/dati-analisi-e-prodotti/contenuti-interattivi/popolazione-residente
[38]Source EDOTTO - regional health IT System
[39]Source EDOTTO - regional health IT System
[40]Relazione sulla Performance 2018 http://www.provincia.le.it/web/provincialecce/anno-2018

Role	Affiliation	Years in role	Years in organisation
Chief Executive Officer	LE LHA	1	30
H&SC District Director	Galatina H&SC District	20	30
Nurse Coordinator – Care Manager	Galatina H&SC District	13	22
IT services Manager	LE LHA	30	30
President of Patients' Association	AEEOS ONLUS Association	25	25
Sick Patient Court Coordinator	-	30	30

Tab. 13-LE LHA stakeholders

7.3 Self-assessment survey

Upon receiving the names and contact details of the six designated stakeholders by Lecce LHA, AReSS Puglia formally invited each of them via e-mail to take part to the maturity assessment process. All stakeholders were carbon-copied in the e-mails, so that they were all made aware of the fellow colleagues involved in the process.

In the e-mail the full process was described, the link to the SCIROCCO Exchange Tool was provided, together with a dedicated helpline. Supportive documents were sent along with the invitation to complete the on-line survey comprised completion guidance with steps to follow, with visuals and screenshots to guide the entire process from beginning to completion and submission.

Two weeks' timeline was scheduled for completion, which was eventually extended because of holiday season in Puglia. The SCIROCCO Exchange project team supported the completion of the on-line survey.

7.3.1 Outcomes of self-assessment survey

All the six invited stakeholders completed the on-line self-assessment survey on time. Table Tab. 14Tab. 5 provides a summary of the 0 to 5 ratings provided by the seven stakeholders on each of the 12 dimensions of the SCIROCCO Exchange Tool. The ratings assigned by each stakeholder vary from 0 to 5, with a prevalence of "0" rather than "5".

The stakeholders, who have been working in Lecce LHA for individual periods that vary from 22 to 30 years and who have been providing services in their roles for periods of time that vary from 1 to 30 years, have returned a heterogeneous perception of the 12 dimensions of the SCIROCCO Exchange Tool, as far as they are informed.

The dimensions on which majority of the stakeholders appeared to have a similar perception are: Q7 "Population Approach" and Q12 "Capacity Building", on which four out of six (i.e. 66 per cent of the reference group) agreed on a score of middle of the scale (3 in yellow). For Q7 it corresponds to "*Risk stratification used for specific groups i.e. those who are at*

risk of becoming frequent service users" while for Q12 it corresponds to "*Learning about integrated care and change management is in place but not widely implemented*". Majority of the self-assessment evidenced a perception of maturity level towards the lower end of the scale (in red).

Figure Fig.16 depicts the outcomes of the on-line individual self-assessment, as completed by each LE LHA stakeholder.

	Tool Dimensions											
Stakeholder Role	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Chief Executive Officer	2	1	3	2	3	2	3	1	3	3	2	3
H&SC District Director	1	2	3	4	4	4	4	3	3	4	1	3
Nurse Coordinator - Care Manager	2	3	3	3	1	2	3	3	2	2	2	3
IT services Manager	2	1	4	4	1	1	3	3	3	3	3	3
President of Patients' Association	1	1	0	0	1	1	0	0	0	0	1	5
Sick Patient Court Coordinator	1	3	2	1	3	1	3	1	2	0	0	1

Dimensions			
Q1	Readiness to Change	Q7	Population Approach
Q2	Structure & Governance	Q8	Citizen Empowerment
Q3	Digital Infrastructure	Q9	Evaluation Methods
Q4	Process Coordination	Q10	Breadth of Ambition
Q5	Finance & Funding	Q11	Innovation Management
Q6	Removal of Inhibitors	Q12	Capacity Building

Ratings		
5 to 4	3 to 2	1 to 0

Tab. 14 - LE LHA summary of self-assessment

Chief Executive Officer

H&SC District Director

Nurse Coordinator – Care Manager

IT services Manager

Fig.16 – LE LHA outcomes of the individual self-assessments

7.3.2 Stakeholder workshop

Upon completion of the self-assessment survey by all the seven designated stakeholders of Lecce LHA, an invitation letter was sent by AReSS Puglia to the LHA via e-mail, to request a feasible date to organise a half-day meeting, comprising a two-hours workshop, followed by a 30 to 45 minutes focus group with all the stakeholders on their experience with the SCIROCCO Exchange Tool.

The stakeholders identified Thursday 21stNovember as the best option for attending the workshop, which was delivered to them on-site at the Lecce LHA CEO Office in Lecce. The session required internet connection and projection facilities.

The purpose of the workshop, which was facilitated by Dr. Mingolla and Dr. Pantzartzis in Italian language, was to: present the assessment process in the Puglia Region; present the initial outcomes of the on-line self-assessment; discuss on the assessments of each dimension; and reach a consensus on the maturity of integrated care in Lecce LHA.

Fig.17 –LE LHA consensus workshop

7.3.3 Negotiation and consensus building

After the presentation, with the support of a PowerPoint presentation and hand-outs of the summary of the on-line self-assessment survey, the invited stakeholders were guided through the negotiation process with a PowerPoint presentations and visuals. The purpose of the negotiation process was to: 1) share the multiple perceptions that guided each stakeholder during the self-assessment, including their experience in the LHA and in their specific roles; and 2) identify the chance to negotiate a shared ranking for each dimension, upon knowledge and information sharing during the workshop.

The negotiation and consensus building process was delivered through an in-depth analysis of each dimension of the SCIROCCO Exchange Tool, presenting and discussing the

justifications and reflections that each stakeholder has provided in their on-line self-assessment. None of the dimensions has been assessed in a homogeneous way in the on-line self-assessment. Each dimension is reported below, in the order as discussed.

Q1 – Readiness to Change -There is an equal split on the perception of this dimension, with three out of six stakeholders rating "1" and the other three rating "2". Among the three lowest ratings, two of the three are by the patients' representatives. The discussion brings to light the different perceptions between the organisation (i.e. LE LHA) and the citizens: LE LHA CEO confirms that change is underway and it is not slow, while the Sick Patient Court Coordinator replies that change is excessively slow and citizens do not have perception of the change, as they do not have access to all the relevant information. The CEO explains that in all categories, hence citizens included, there are those who are enthusiast of the change and those who are resistant to the change. As a result, consensus is reached on 2 - *Dialogue and consensus-building underway; plan being developed*.

Q2 – Structure & Governance – Also on this dimension, there is an almost equal split on the perception that the stakeholders have, with three out of five rating "1", and the CEO among them. He calls for building up structured networks, but acknowledges the existence of informal networks already in place. The Nurse Coordinator and the Sick Patient Court Coordinator confirmed that structure and governance are very much subject to variations across the different bodies, almost as they are at regional and national level. All stakeholders agree on 2 -*Formation of task forces, alliances and other informal ways of collaborating*.

Q3 – Digital Infrastructure - The stakeholders have heterogeneous perceptions on this dimension, with returned ratings from "0" to "4". The different roles play a relevant part, with the CEO making clear reference to the infrastructure, that does exist and it is fully linked into the national network. Nevertheless, the IT services Manager suggests that some processes require time to be embraced in a systematic way, despite training has been provided and procedures are already in place. After evaluating the current situation, the stakeholders agree on assessing this dimension 4 – *eHealth services to support integrated care are deployed widely at large scale*.

Q4 – Process Coordination – The stakeholders have heterogeneous perceptions on this dimension, with returned ratings from "0" to "4". The discussion brings to evidence that standardisation processes are subject to the local dimension, as so they may be present for some integrated care pathways, but they are not available for the full range of integrated care service delivery. The two patients' representatives have rated at the lowest end on the scale, demonstrating how citizens are not always aware of the care pathways. The CEO highlighted the importance of the therapeutic organisation model (i.e. Percorsi Diagnostico Terapeutici Assistenziali[41]) on rheumatic diseases as a means of simplification of the pathways. AC suggests the high number of citizens accessing the services may pose some limits to the Specific Clinical Pathways and other services. Consensus is reached on 3 -*A*

[41]Percorsi Diagnostico Terapeutici Assistenziali (PDTA) is a Clinical Governance tool that defines standard levels of assistance against guidelines. More info is available at https://www.sanita.puglia.it/web/irccs/percorsi-diagnostici-terapeutici-assistenziali-pdta-

recommended set of agreed technical standards at regional/national level; some shared procurements of new systems at regional/national level; some large-scale consolidations of ICT underway.

Q5 - Finance &Funding – Three out of six stakeholders rated 1 -*Funding is available but mainly for the pilot projects and testing*, with two main justifications: the actual lack of funding other than to be invested on pilot projects, but also the lack of information on this specific dimension by at least two out of the six stakeholders. After discussion, the stakeholders agree on 4 - *Regional/national funding and/or reimbursement schemes for on-going operations are available.*

Q6 - Removal of Inhibitors –Also on this dimension, three out of six stakeholders rated 1 - *Awareness of inhibitors but no systematic approach to their management is in place*. The CEO confirmed that at the managerial level there is clear knowledge and understanding of the inhibitors and that action needs to be taken. Nevertheless, as already stated at the very beginning of the consensus building process, there are those who are enthusiast of the change and those who are resistant to the change, hence, to taking action towards removing inhibitors. All stakeholders agree on a 3- *Implementation Plan and process for removing inhibitors have started being implemented locally.*

Q7 - Population Approach – Four out of six stakeholders have rated this dimension 3 -*Risk stratification used for specific groups i.e. those who are at risk of becoming frequent service users.* The other two stakeholders have rated it towards the higher (i.e. "4") and lower (i.e. "0") end of the scale. The population is stratified with a systematic approach (many projects or programs e.g. "Leonardo project", "Nardino project", "Puglia Care" are all attempts conducted to implement a population approach in a systematic way). All stakeholders agree on the need for a cultural change at all levels, hence including the GPs. As a consequence, the stakeholders confirm the rating "3".

Q8 - Citizen Empowerment – Three out of six stakeholders have rated this dimension 3 - *Citizens are consulted on integrated care services and have access to health information and health data*. Nevertheless, it is brought to evidence that not all citizens are capable of independently accessing the system, that is up and running. There are elements (e.g. EHR) and programmes (e.g. Puglia Care 3.0) in place to enable wide citizen empowerment, but the Sick Patient Court Coordinator clearly explains that an empowered citizen may well result in more obstacles (e.g. delays) to the delivery of integrated care. The lowest rating (i.e. "0") for this dimension has been provided by a patients' representative, who do not always feel fully empowered on decisions linked to individual health care pathways. After discussion, all stakeholders converge on "3".

Q9 - Evaluation Methods – The stakeholders have a positive perception of this dimension, with three out of six rating "3" and two out of six rating it "2". In particular, the uneven rating is due to the perception that they have on how evaluation of integrated care methods is part of a systematic approach. They all agree on efforts being made towards this. Hence, after discussion, and recording that the info does not get to the citizens at all times, general consensus is reached on 3 - *Some integrated care initiatives and services are evaluated as part of a systematic approach.*

Q10 - Breadth of Ambition – The stakeholders have heterogeneous perceptions on this dimension, with returned ratings from "0" to "4". What is clearly emerging is that the two patients' representatives rated the dimension 0 -*Coordination activities arise but not as a result of planning or the implementation of a strategy*. Their rating is partially subject to two elements: the citizens do not hold all the relevant information, and also detailed planning to deliver the ambitions that do exist is mostly missing. After discussion, and with some efforts, consensus is reached on 3 -*Integration between care levels (e.g., between primary and secondary care) is achieved*.

Q11 - Innovation Management – This dimension raised concerns by multiple stakeholders, with ratings ranging from "0" to "3". In particular, the two patients' representatives are bringing to light the lack of information on elements that should be acquired by this point (e.g. EHR). In response to their concerns, the CEO explains that structured processes (e.g. collaboration with MSc degrees at Uni Salento) are in place, but standardisation takes time to be delivered at full capacity. After discussion, the stakeholders agree on rating 2 - *Innovations are captured and there are some mechanisms in place to encourage knowledge transfer*.

Q12 - Capacity Building – Three out of six stakeholders assessed this dimension in a medium-to-positive way with a 3 -*Learning about integrated care and change management is in place but not widely implemented*. Learning about integrated care and change management is in place but not yet implemented. It is essential to involve all the different stakeholders in order to succeed and expressly the citizens and their representatives. The CEO explains how, at the moment of the consensus workshop, there is an organisational plan underway for LE LHA, which is expected to involve all the different stakeholders, as capacity building is fully recognised as one of the key dimensions to deliver integrated care pathways.

7.3.4 Final consensus

FigureFig.16illustrates the final spider diagram with the final consensus of the six Lecce LHA designated stakeholders. The negotiation process highlighted elements of difference among the stakeholders, which were discussed and led to reaching consensus on all dimensions as individually assessed by majority of the stakeholders, with the exception of dimensions Q2, Q4, Q5, and Q6, as it appears from the final spider diagram below reported in figure Fig.18.

Fig.18 – LE LHA final spider diagram

Table Tab. 9 contains the final scores reached through the consensus building process that were summarised earlier on. Justifications and reflections on each of the 12 dimensions have also been reported.

Dimension	Consensus	Justifications & Reflections
Q1 - Readiness to Change	2	The vision exists. It is complex to address the change in every part of the Region (i.e. LE LHA), as it is a process that has just been initiated in the H&SC District (e.g. CC Centres, Community Hospitals). There is a clear strategy, but this is slowed down by those stakeholders who do not see the urgency to change. The system is ready. The content needs to be defined, either produced or bought in.
Q2 - Structure & Governance	2	It is not well established, as the organisation LE LHA is undergoing a change management process that will lead to the definition of more rigorous structures. It is crucial to identify new governance coherent with the new vision. Issues mostly related with resources (e.g. staff). At this moment there are informal collaborations and task forces although not in a systematic way.
Q3 - Digital Infrastructure	4	There is a solid digital infrastructure in the organisation LE LHA. The staff is trained and capable to use it as intended, despite the age group of the staff. The infrastructure is not always used as expected at its full potential. Nevertheless there is a limit to apply them throughout the entire spectrum of integrated care services (e.g. need of paperwork as a back-up when travelling across the local system).
Q4 – Process coordination	3	There is coordination as processes are planned, but they are not implemented, resulting in scattered application across the territory (e.g. local level).
Q5 – Finance & Funding	4	EU fund opportunities are identified and accessed; nevertheless it is necessary to use them as requested.
Q6 - Removal of inhibitors	3	There is a strategy to remove inhibitors shared at the management level. Nevertheless there is a limited response from the bottom, which has started to be implemented.
Q7 - Population Approach	3	The population is stratified but not with a systematic approach (e.g. “Leonardo” project, “Nardino” project, Puglia Care are all attempts to implement a population approach).
Q8 - Citizen Empowerment	3	Empowerment is acknowledged and citizens have access to data on their health condition. In some case citizens do not access their data.
Q9 - Evaluation Methods	3	Evaluation methods are in place; nevertheless the info does not get to the citizens at all times.

Dimension	Consensus	Justifications & Reflections
Q10 - Breadth of Ambition	3	The stakeholders converge on the score "3".
Q11 -Innovation Management	2	Innovations are captured and some mechanisms are in place (e.g. scientific lab in partnership with Uni Salento, memorandum of understanding with Uni Salento). However, formalised process for innovation management has still to be implemented.
Q12 - Capacity Building	3	Learning about integrated care and change management is in place but not yet implemented. It is essential to involve all the different stakeholders in order to succeed.

Tab. 15 – LE LHA summary of consensus meeting

7.4 Analysis of the outcomes - Lecce Local Health Authority

Looking at the overall consensus diagram, dimension Q3 - Digital Infrastructure with Q5 – Fundingappear more significant than others in regards to carrying out integrated care in LE LHA, this because the approach towards the integrated care model is enforced from the management of the organisation LE LHA and it is supported by a solid digital infrastructure. All the staff is trained and capable to use it as intended, despite differences in age groups of the staff. None of the results was particularly surprising to the stakeholder.

The consensus diagram as a whole offers a balanced range across the 12 dimensions about the maturity of integrated care in the LE LHA, which is overall assessed between the 2and 4 points the reference scale 0 to 5. It is a harmonising image from a system-perspective and it does reflect the actual situation of the organisation at the time of the consensus workshop. Some dimensions are relevant to each other and they reinforce one the other. In particular, Q5 – Funding provides support to Q3 - Digital Infrastructure, besides other elements. No need to implement the process of identifying available funding was reported by LE LHA.

A common factor among multiple dimensions is the limited Structure & Governance at the time of the consensus workshop, as the organisation LE LHA is undergoing a change management process. Nevertheless, a bottom-up approach is the positive counterpart recorded: multiple informal collaborations and task forces are in place, although not in a systematic way.

Specific factors in the organisation LE LHA affect the recorded strengths and weaknesses. The Breadth of Ambition and informal collaboration across the organisation LE LHA affects the emerging strengths. The factor that deeply influences the weaknesses is the very poor communication between the organisation LE LHA (e.g. staff) and the citizens in the catchment area. This is an element that needs to be monitored and implemented, as technological systems are in place and funding is available, in order to achieve maturity in integrated care delivery.

7.5 Key message – Lecce Local Health Authority

All the stakeholders expressed positive opinions; they found the results of the survey compliant with the Health Authority's current situation. The importance of the self-assessment tool has been highlighted. "Evaluation of the process is already in place" (the CEO) for this reason is undergoing a memorandum of understanding with the University of Lecce (i.e. Uni Salento), "Process Engineering".

7.6 Conclusions – Lecce Local Health Authority

After the negotiation and consensus building process on each of the 12th dimensions and the justifications provided by the five designated stakeholders on each of the 12th dimensions, the facilitators have asked final comments on the strengths of LE LHA in relation to the maturity of the integrated care model. The individual answers provided are below reported.

President of Patients' Association> There is a strong desire to deliver together with a vision shared among all stakeholders, including citizens.

Nurse Coordinator > There is a very precise perception and clear knowledge of the capabilities across LE LHA.

Also, final comments on the weaknesses of LE LHA in relation to the maturity of the integrated care model have been invited. In this case, all the stakeholders agreed with the CEO on the greatest weakness of the organisation LE LHA being communication among the stakeholders. The need for better communication between internal and external stakeholders is deeply envisaged.

The outcomes reflected the local situations and the expectations of the stakeholders. The emerged challenge is the communication.

8 Self-assessment process – Taranto Local Health Authority

8.1 Introduction to Taranto Local Health

Taranto LHA covers a territory of 2,436.67 Km^2, almost half of which is flat along a continuous coastline, while the other half consists in hills. It comprises a total of 29 municipalities, which are organised in six H&SC Districts.

There are 12 acute care infrastructures, of which four are public, and eight are private with public access via NHS agreement[42].

In TA LHA there is a total of 453 GPs (without considering Paediatricians), of which 330 (i.e. 72.7%) are structured in complex networks to ensure seamless care delivery to patients[43].

The resident population was 576,756 inhabitants[44], of which approximately 34% was concentrated in the municipality of Taranto. People aged over 65 years old are 21.9% of the entire population[45].

Mortality rate is approximately 10 per thousand inhabitants. The major causes of mortality are cardiovascular diseases 37.11 per 10,000 inhabitants, along the National lines, followed by cancer 26.12 per 10,000 inhabitants.[46] The most frequent cancer is trachea, bronchus and lung cancer for males while breast cancer for females. This may reflect the contextual issues of the territory, where large industrial production factories are still present[47].

8.2 Identification process of the local stakeholders

AReSS Puglia asked Taranto LHA Top Management to appoint a minimum of five stakeholders to gather different assessment perspectives concerning the 12 maturity matrix dimensions and to obtain a multi-stakeholder opinion on integrated care local initiatives. AReSS Puglia specified the different roles within which to identify the assessors comprising: a representative of the Top Management (e.g. CEO, CMO, CAO); a representative of the Health & Social Care District; a representative with medical background (e.g. Care Manager, Chief Nurse); a representative of the ICT Team; and a patients' group representative. Experience in each role and the affiliation to the local organisation where recorded to support the data analysis.

Taranto LHA identified five stakeholders as requested, to which one other was later added, as representative of IT specialist. The final list of theTab. 16 local stakeholders identified

[42]Source EDOTTO - regional health IT System
[43]Source EDOTTO - regional health IT System
[44]Source ISTAT 2018 data https://www.istat.it/it/dati-analisi-e-prodotti/contenuti-interattivi/popolazione-residente
[45]Source ISTAT 2017 data
[46]Piano della Performance 2019-2021 https://www.sanita.puglia.it/web/asl-taranto/piano-della-performance
[47]Screenings for cardiovascular diseases are in place for residents in polluted areas and screenings for prevention are in place for healthy lifestyles. More info available at https://www.sanita.puglia.it/web/csa/centro-salute-ambiente-taranto

by Taranto LHA who completed the self-assessment process is reported in table Tab. 1below, with years spent in the role and years spent in the organisation to contextualise their individual responses during the analysis.

Role	Affiliation	Years in role	Years in organisation
Medical Doctor	TA LHA	3	30
H&SC District Director	LHD 6	23	27
CCC Coordinator	CCC	8	15
President of Patients' Association	Patient Advisory Committee	NA	NA
EHR Manager	TA LHA	NA	NA
IT services Manager	TA LHA	4	10

Tab. 16-TA LHA stakeholders

8.3 Self-assessment survey

Upon receiving the names and contact details of the six designated stakeholders by Taranto LHA, AReSS Puglia formally invited each of them via e-mail to take part to the maturity assessment process. All stakeholders were carbon-copied in the e-mails, so that they were all made aware of the fellow colleagues involved in the process.

In the e-mail the full process was described, the link to the SCIROCCO Exchange Tool was provided, together with a dedicated helpline. Supportive documents sent along with the invitation to complete the on-line survey comprised completion guidance with steps to follow, with visuals and screenshots to guide the entire process from beginning to completion and submission.

Two weeks' timeline was allowed for completion, which was eventually extended because of holiday season in Puglia. The SCIROCCO Exchange project team supported the completion of the on-line survey.

8.3.1 Outcomes of self-assessment survey

All the six invited stakeholders completed the on-line self-assessment survey. Table

Dimensions			
Q1	Readiness to Change	Q7	Population Approach
Q2	Structure & Governance	Q8	Citizen Empowerment
Q3	Digital Infrastructure	Q9	Evaluation Methods
Q4	Process Coordination	Q10	Breadth of Ambition
Q5	Finance & Funding	Q11	Innovation Management
Q6	Removal of Inhibitors	Q12	Capacity Building

Ratings		
5 to 4	3 to 2	1 to 0

Tab. 17provides a summary of the 0 to 5 ratings provided by the seven stakeholders on each of the 12 dimensions of the SCIROCCO Exchange Tool. The ratings assigned by each stakeholder vary from 0 to 4, with no 5 recorded. The stakeholders, who have been working in Taranto LHA for individual periods that vary from 10 to 30 years and who have been providing services in their roles for periods of time that vary from 3 to 23 years, have provided a heterogeneous perception of the 12 dimensions of the SCIROCCO Exchange Tool, as their knowledge and relevance of each specific dimension matched their individual roles.

The dimensions on which majority of the stakeholders provided a homogeneous rating are: Q7 “Population Approach”, Q9 “Evaluation Methods”, and Q12 “Capacity Building”. The dimensions Q1 “Readiness to Change”, Q2 “Structure & Governance”, Q5 “Funding”, and Q10 “Breadth of Ambition” are rated on the lowest (in red) end of the scale, with Q10 being the most critical. The dimension Q3 “eHealth Services” is the only rated towards the higher (in green) end of the scale.

Figure Fig.19Fig.16 depicts the outcomes of the on-line individual self-assessment, as completed by each TA LHA stakeholder.

	Tool Dimensions											
Stakeholder Role	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12
Medical Doctor	4	2	4	4	1	2	2	3	2	0	2	3
H&SC District Director	1	1	4	3	0	1	2	3	2	0	2	3
CCC Coordinator	1	1	2	2	4	1	4	1	3	2	1	1
President of Patients' Association	1	1	2	1	2	2	2	1	2	1	1	2
EHR Manager	2	2	3	1	1	2	2	2	1	1	2	2

Dimensions			
Q1	Readiness to Change	Q7	Population Approach
Q2	Structure & Governance	Q8	Citizen Empowerment
Q3	Digital Infrastructure	Q9	Evaluation Methods
Q4	Process Coordination	Q10	Breadth of Ambition
Q5	Finance & Funding	Q11	Innovation Management
Q6	Removal of Inhibitors	Q12	Capacity Building

Ratings		
5 to 4	3 to 2	1 to 0

Tab. 17 – TA LHA summary of self-assessment

Medical Doctor

H&SC District Director

CCC Coordinator

EHR Manager

President of Patients' Association

Fig.19 – TA LHA outcomes of the individual self-assessments

8.3.2 Stakeholder workshop

Upon completion of the self-assessment survey by all the seven designated stakeholders of Taranto LHA, an invitation letter was sent by AReSS Puglia to the LHA via e-mail, to request a feasible date to organise a half-day meeting, comprising a two-hours workshop, followed by a 30 to 45 minutes focus group with all the stakeholders on their experience with the SCIROCCO Exchange Tool.

The stakeholders identified Wednesday30thOctober as the best option for attending the workshop, which was delivered to them on-site at the Taranto LHA CEO office, in Taranto.

The purpose of the workshop, which was facilitated by Dr. Mingolla and Dr. Pantzartzis in Italian language, was to: present the assessment process in the Puglia Region; present the initial outcomes of the on-line self-assessment; discuss on the assessments of each dimension; and reach a consensus on the maturity of integrated care in Taranto LHA.

Fig.20 – TA LHA consensus workshop

8.3.3 Negotiation and consensus building

After the presentation, with the support of a PowerPoint presentation and hand-outs, of the summary of the on-line self-assessment survey, the invited stakeholders were guided through the negotiation process with a PowerPoint presentations and visuals. The purpose of the negotiation process was to: 1) share the multiple perceptions that guided each stakeholder during the self-assessment, including their experience in the LHA and in their specific roles; and 2) identify the chance to negotiate a shared ranking for each dimension, upon knowledge and information sharing during the workshop.

The negotiation and consensus building process was delivered through an in-depth analysis of each dimension of the SCIROCCO Exchange Tool, presenting and discussing the justifications and reflections that each stakeholder has provided in their on-line self-assessment. None of the dimensions has been assessed in a homogeneous way in the on-line self-assessment. Minor variations (i.e. one out of five respondents) were recorded for dimensions Q7, Q9 and Q12.Each dimension is reported below, in the order as discussed.

Q1 – Readiness to Change - Three out of five stakeholders have a very poor perceptions of this dimension, rating 1 –*Compelling need is recognised, but no clear vision or strategic plan*. The change is currently on-going, despite there is no evidence of a delivery plan. Change is among the top priorities of the organisation TA LHA, but this is being delivered through

means of informal actions. After discussion, the stakeholders agree on 2 - *Dialogue and consensus-building underway; plan being developed*.

Q2 - Structure & Governance – Also on this dimension, three out of five stakeholders have a very poor perception, rating 1 –*Recognition of the need for structural and governance change*. The Medical Doctor brings to evidence the lack of communication among the different task forces. It is absolutely crucial to organise the action to deliver structured processes for which accountability is clear to all the stakeholders. After discussion, the stakeholders reach consensus on rating 2 -*Formation of task forces, alliances and other informal ways of collaborating*, but only limited to the informal collaborations.

Q3 - Digital Infrastructure - This is one of the two dimensions on which all the stakeholders have a positive perception, with two rating "4", one rating "3" and two others rating "2". Nevertheless, the patients' representative is particularly critical on this dimension and on the lack of efforts to allow all citizens make the best possible use of Digital Infrastructure services (e.g. EHR). In response the Medical Doctor reassured that the need for improving eHealth Services is within the organisation TALHA remit. All stakeholders agree on 3 -*eHealth services to support integrated care are piloted but there is not yet region wide coverage*.

Q4 - Process Coordination – The stakeholders all have heterogeneous perceptions of this dimension, with ratings from "1" to "4". In particular, they all made reference to Regional regulations that are in place to guide process coordination (e.g. standardisation and simplification). The Medical Doctor confirms that TA LHA is part of wider regional networks that work on process coordination. After discussion, consensus is achieved on 3 - *A recommended set of agreed technical standards at regional/national level; some shared procurements of new systems at regional/national level; some large-scale consolidations of ICT underway*.

Q5 - Finance &Funding – Three out of five stakeholders have a negative perception of this dimension. Among all five participants, ratings vary from "0" to "4", which returns a mixed perception at organisational level. In particular, the huge variations are determined by the background of the stakeholders, their role and knowledge on the funding subject. If the rating is only assigned in consideration of the local scale (i.e. TA LHA), then the rate should be towards the lower end of the scale, as there is no available funding. The CCC Coordinator reported the three to five years needed to complete any funded project. If pilot projects are put aside, and the focus is only on integrated care delivery, then all stakeholders agree on 0 -*No additional funding is available to support the move towards integrated care*.

Q6 - Removal of Inhibitors –Three out of five stakeholders rate this dimension 2 -*Strategy for removing inhibitors agreed at a high level*. Nevertheless, the other two stakeholders rate it 1 -*Awareness of inhibitors but no systematic approach to their management is in place*. During the discussion it is brought to evidence that inhibitors may well be in the process to be removed, but this situation is mostly limited to healthcare pathways, and not integrated care delivery pathways. As a result, all stakeholders converge on rating "1".

Q7 - Population Approach – Also this dimension, as dimension Q3, has all stakeholders confirming a positive perception, with all rating 2 -*Risk stratification approach is used in*

certain projects on an experimental basis , other than one only rating 4 -*A population risk approach is applied to integrated care services but not yet systematically or to the full population*[48]. Consensus is agreed on "2", as a lack of understanding on how a systematic population approach may be beneficial to the integrated care delivery model.

Q8 – Citizen Empowerment – This dimension is a matter of debate among the stakeholders. Citizens can have access to health information and health data; however, this is not always the case. They are not always fully aware of what they can access and how. Majority of citizens acknowledges the electronic patient records (i.e. EHR). The stakeholders, after discussion, agree to assign 3 -*Citizens are consulted on integrated care services and have access to health information and health data.*

Q9 – Evaluation Methods – This dimension is rated on the mid-end of the assessment scale with "2" and "3". Only one stakeholder rated 1 -*Evaluation of integrated care services is planned to take place and be established as part of a systematic approach*, making reference to the need still to develop customer satisfaction on HTA. From the discussion, it appears evident that only in some cases (e.g. specific integrated care settings, pilot projects) evaluation methods are in place through a systematic methodology. Hence, all stakeholders agree on 2 -*Evaluation of integrated care services exists, but not as a part of a systematic approach.*

Q10 – Breadth of Ambition – This dimension is rated on the lower end of the assessment scale with "0" and "1". The H&SC District Directorexplains how unfortunately there is no homogeneous approach towards getting citizens into the integrated care system pathway. There may be some pilot projects; however, there is not a systematic approach towards a full integration of care services, unless within the same level of care. Only one stakeholder tared 2 -*Integration within the same level of care (e.g., primary care) is achieved.* Consensus is achieved on 1 -*The citizen or their family may need to act as the integrator of service in an unpredictable way.*

Q11 – Innovation Management – Three out of five stakeholders rated this dimension 2 -*Innovations are captured and there are some mechanisms in place to encourage knowledge transfer*. They all agree that innovation management is not yet fully at regime within TA LHA, despite multiple efforts are being made. Technological innovations appear much easier to be implemented, if compared to innovations on tendering systems (e.g. Pre-Commercial Procurement, Public Procurement of Innovation, Public-Private Partnership, Shared Risk, Payments by Results). Two out of the three stakeholders suggest using EU-funded projects and/or partnerships to implement innovation management (e.g. Horizon 2020, ERDF, EHR). Consensus is confirmed on "2".

[48] The risk assessment activities include risk evaluation in the area Jonico-Salentina and in the micro-areas affected by critical environmental issues (e.g. Tamburi, Borgo and Paolo V neighbourhoods) (LR 21/2012). More info available at https://www.sanita.puglia.it/web/csa/sorveglianza-epidemiologica . The Cardiovascular and Respiratory Prevention Programme is delivered to female and male residents of 45 (F) and 40 (M) years old in the neighborhoods above mentioned. Since November 2015 the screening Programme has been opened to female and male aged 50 and living in Taranto.

Q12 – Capacity Building – The perception of this dimension varies across the stakeholders, as four out of five stakeholders rated it "2" and "3", with only one stakeholder rating "1". What come to evidence on this dimension are the differences between different parts of the same LHA, as the areas closer to the centre more frequently have the citizens taking part to the process, while this is much less taking place in the peripheral areas. Also, it has to be reported that in some circumstances, capacity building is limited by the staff themselves (e.g. when staff is closer to retirement will not act at regime). After discussion, all stakeholders agree on 3 - *Learning about integrated care and change management is in place but not widely implemented.*

8.3.4 Final consensus

Figure Fig.21 illustrates the final spider diagram with the final consensus of the six Taranto LHA designated stakeholders. The negotiation process highlighted elements of difference and similarities among the stakeholders, which were discussed and led to reaching consensus on a rating as assessed by majority of the stakeholders in only five out of the 12 dimensions, while exceptions were recorded on the remaining.

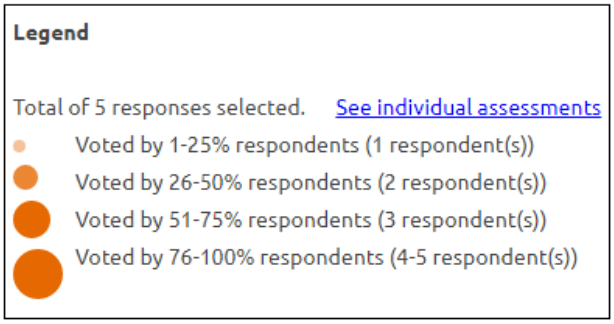

Fig.21 – TA LHA final spider diagram

Table Tab. 9 contains the final scores reached through the consensus building process that were summarised earlier on. Justifications and reflections on each of the 12 dimensions have been also summarised.

Dimension	Consensus	Justifications & Reflections
Q1 - Readiness to Change	2	At the moment of meeting there is no plan in place. Readiness to change is a priority of the organisation, thus dialogue is underway. It is essential to coordinate the individual efforts in a joint plan, as individual capabilities are currently leading the change.
Q2 - Structure & Governance	2	The assessment is based on the perception that governance is limited to informal collaborations only for TA LHA.
Q3 - Digital Infrastructure	3	There is a mandate to deploy e-Health services across the organisation, but this is not yet implemented at the time of the meeting.
Q4 – Process coordination	3	Regional regulations are in place to guide standardisation and simplification of the processes.
Q5 – Finance & Funding	0	There is no funding in place to support the move towards integrated care, other than funding for pilot projects only.
Q6 - Removal of inhibitors	1	This only relates to integrated care and regional scale.
Q7 - Population Approach	3	Population approach is only applied to specific groups (i.e. prevention) that not necessarily include integrated care delivery.
Q8 - Citizen Empowerment	3	Citizens can have access to health information and health data; however this is not always the case. They are not always fully aware of what they can access and how. Majority of citizens acknowledges the electronic patient records (i.e. EHR).
Q9 - Evaluation Methods	2	It does exist but not as a systematic process, as highly linked to individual capabilities and knowledge.
Q10 - Breadth of Ambition	1	There is no homogenous approach on this dimension (ref to patient's representative score).
Q11 -Innovation Management	2	There is a degree of innovation, which is encouraged and supported. However, innovations are not yet at regime.
Q12 - Capacity Building	3	There is a lack of participation from the outer stakeholders (i.e. urban centre outskirts) due to their limited interest, which may be the result of lack of knowledge and information.

Tab. 18 – TA LHA summary of consensus meeting

8.4 Analysis of the outcomes – Taranto Local Health Authority

Looking at the consensus diagram, dimension Q5 – Funding, together with Q6 – Removal of Inhibitors and Q10 – Breadth of Ambition appear more significant than others in regards to limiting integrated care in TA LHA. The perceived lack of funding in place to support

integrated care deeply affects the management. The perceived lack of funding is a consequence of the limited positive impact of investments for integrated care, if compared to the investments in place for ICT infrastructure and medical devices equipment in hospital care settings.

The consensus diagram, as a whole picture, shows an interesting and homogeneous situation across the 12 dimensions about the maturity of integrated care in TA LHA, which is overall, assessed between the 0 and 3 points the reference scale 0 to 5, which is overall one of the lowest recorded. It is not a fully harmonising image from a system-perspective, but it does reflect the actual situation of the organisation at the time of the consensus workshop. Some dimensions are relevant to each other and they reinforce one the other.

A common factor among multiple dimensions is the limited consistent knowledge on a number of dimensions (e.g. Q10 – Breadth of Ambition), which then influences the overall consensus diagram.

Specific factors in the organisation TA LHA affect the recorded strengths and weaknesses. One specific factor in the organisation TA LHA affects the strengths: the strong desire to change at management level plays an important role in having positive reflections on a number of dimensions. The factor that deeply affects the weaknesses is the limited coming together in the organisation on joint and efforts.

8.5 Key message – Taranto Local Health Authority

All the participants agreed that they have learned something thanks to the self-assessment process. Culture emerged as the most relevant factor for an effective change and modernization of the LHA's integrated care model. The CCC Coordinator: "it will be important to improve the sense of belonging of employee"; the presence of elderly and little motivating human resources emerged as a substantial element. "It would be necessary to implement a process of mandatory monitoring of integrated care".

8.6 Conclusions –Taranto Local Health Authority

After the negotiation and consensus building process on each of the 12 dimensions and the justifications provided by the five designated stakeholders on each of the 12 dimensions, the facilitators have asked final comments on the strengths of TA LHA in relation to the maturity of the integrated care model. The individual answers provided are below reported.

CCC Coordinator >Integration processes have been initiated and they have multiple stakeholders involved.

H&SC District Director>There is a very strong determination and desire for change from the top management, which is key in driving the change and delivering an effective integrated care system. All the Directors of TA LHA (i.e. Top management Team) are fully engaged and have the maturity of the integrated care model among their top priorities. The overall objectives are extremely ambitious. Nevertheless, there is an evident lack of resources that deeply affects the process.

Also, final comments on the weaknesses of TA LHA in relation to the maturity of the integrated care model have been invited. The individual answers provided are below reported.

H&SC District Director > There is a strong difficulty in converging on common objectives, and this particularly if considering multiple stakeholders belonging to different professional categories/ areas (e.g. medical, clinical, research, support, etc).

CCC Coordinator > One weakness that needs to be reported above all is the limited sense of belonging to TA LHA organisation, which makes it difficult to work positively together.

As described in sections 8.3 and 8.4, the areas with highest differences among the stakeholders are Q1 – Readiness to Change,Q4 - Process coordination, and Q5 – Funding. The areas on which all five stakeholders other than one agreed are: Q7 –Population Approach, Q9 –Evaluation Methods, and Q12 - Capacity Building. The outcomes reflected the expectations of the stakeholders. The emerged challenge is the lack of unity as one whole organisation, which consequently affects process and service management.

9 Conclusions and next steps in Puglia Region

This research has provided a qualitative multi-dimensional and multi-professional representation of the integrated care maturity level of the Puglia LHAs from the stakeholders' point of view. The level of maturity of each LHA health and social care system varies from medium to high.

Regional managers and clinicians tend to score higher on the maturity progress in relation to each LHA individual context more than citizens' representative. This can be explained by the fact that some services (e.g. provision of information on care) are not easily accessible to the citizens.

Looking at the overall consensus diagrams of the six LHAs, major strengths include Population Approach, Process Coordination, Citizen Empowerment, and Digital Infrastructure. In contrast, the areas of Removal of Inhibitors, Finance and Funding, and Evaluation Methods have still room for improvement in Puglia Region. Breadth of Ambition resulted as the most variable dimension across the six LHAs, and across the different stakeholders that have been involved during the process.

There are some specific factors in Puglia that need to be taken into account to understand its strengths and weaknesses in integrated care provision, particularly in relation to the domains with lower maturity. The Puglia region has invested considerable resources for chronic care provision in recent years. However, cultural and infrastructure gaps may sometimes result in barriers (e.g. telemedicine has not yet allowed services to be provided across the whole Region). These services are available only in some H&SC districts, mostly as result of trial initiatives, or as good practices with limited implementation as yet. Despite this, the emerging picture reveals a dynamic scenario in which several e-Health good practices are on the verge of being scaled up as a result of a positive assessment by the Regional HTA centre.

The outcomes of the six consensus workshops have brought to evidence space for improvement in the delivery of integrated care services to the citizens in Puglia Region, especially on a systematic basis, and particularly in the three dimensions where scores were lower.

1. Finance & Funding – Puglia region is among the regions in Italy with to access ERDF. The analysis highlights the efforts of specific LHAs that may struggle with the availability of in-house trained staff to manage this area, despite full awareness of the funding opportunities[49].
2. Removal of Inhibitors – All six LHAs share similar perception of this dimension, as variations are reported in the approach depending upon the recognition of inhibitors (e.g. perception and identification) within the organisations (i.e. LHAs) and outside

[49]More info are available at http://www.regione.puglia.it/assets/-/asset_publisher/ci0Qi9xxHeH5/content/por-puglia-fesr-fse-raggiunto-e-superato-target-spesa/3728079?p_p_auth=9hFI1JxA&redirect=%2Frisultati-

(e.g. citizens). Besides, both within and outside the LHAs there are those who are "enthusiast" and those who are "resistant", adding a further element to the overall picture.

3. Evaluation Methods – Data collection is mostly in place throughout the Region, however, not specifically to support integrated care delivery. Hence, some LHAs may consider the data collection effort excessive compared to their current use.

Puglia's self-assessment outcomes and local context for integrated care are coherent with the peer-assessment conducted by the European Commission which awarded Puglia in 2019 as a 4-stars Reference Site[50] in the European Innovation Partnership on Active and Healthy Ageing.

Pilot Projects have proven the validity of the process. Several e-Health good practices are still on the verge of being scaled up as a result of a positive assessment by the Regional HTA centre. Inhibitors are still present and require systematic and organised action to be removed. Besides, funding approaches need to support the delivery of integrated care in a smoother way so that the timeline is reduced, and investments can be more dynamically made within a structured delivery plan.

During the six workshops the stakeholders demonstrated their willingness to bring this process to a further level, with full awareness that knowledge sharing and information transfer to all participant stakeholders is among the key enablers of a full integrated care pathway.

After the conclusion of the self-assessment process, comprising the 33 on-line individual assessment surveys, the six LHAs workshops, and the data analysis that has informed this report, the next steps in Puglia Region include:

1. knowledge sharing of the main outcomes with the six LHAs participating to the process;
2. identify strengths and weaknesses of the LHAs with the aim to facilitate multi-disciplinary discussions and consensus-building about the Good Practice assessment;
3. identify strengths and weaknesses to take part to twinning and coaching activities; and
4. implement capacity building at regional level (i.e. Puglia).

AReSS Puglia will use the data gathered and the emerging elements to direct integrated care implementation policies and actions at local and regional scale (i.e. Puglia Region). In addition, AReSS Puglia may implement coordination and bespoke actions to standardise social care pathways by specific initiatives as "Pathlab" and "Netlab", two of the "value labs" of The Strategic Social Care Agency for the setup of standardised clinical pathwaysand the creation of clinical networks. Moreover, AReSS will promote the governance of

[50]Source http://www.regione.puglia.it/web/pressregione/pressregione-rss/-/asset_publisher/V2vFLtqdAjTg/content/id/45109213

innovation and the scale up of efficient technologies through one of its “expert centres” the Regional HTA Centre[51], so as trial of Innovation Procurement initiatives, etc. etc.

[51]More info on the Regional HTA Centre are available at https://www.sanita.puglia.it/web/aress/hta-ricerca-e-innovazione

Annex 1 Self-Assessment Workshop in Bari LHA Agenda

Time	Session Title
11,30	**Saluti di benvenuto, obiettivi dell'incontro, presentazione dei partecipanti**
11,40	**Presentazione del progetto SCIROCCO Exchange** Serena Mingolla, SCIROCCO Exchange Project Coordinator
11,50	**Il processo di autovalutazione con il tool SCIROCCO Exchange** • Introduzione sul processo di autovalutazione nelle 6 ASL pugliesi • Il processo di autovalutazione nella ASL BA Efthimia Pantzartzis, SCIROCCO Exchange Assessment Manager
12,00	**Negoziazione e & Consensus Building** • L'Assessment Manager introdurrà i risultati per ogni dimensione del tool ricercando il consensus per quelle dimensioni che hanno riportato punteggi differenti (tenendo conto delle motivazioni riportate dai diversi Stakeholder) Efthimia Pantzartzis, SCIROCCO Exchange Assessment Manager
13,30	**Conclusioni e riflessioni dei partecipanti sul processo di autovalutazione** (compilazione del questionario finalizzato a migliorare lo strumento) Serena Mingolla, SCIROCCO Exchange Project Coordinator

Annex 2 Self-Assessment Workshop in Brindisi LHA Agenda

Time	Session Title
11,00	**Saluti di benvenuto, obiettivi dell'incontro, presentazione dei partecipanti**
11,10	**Presentazione del progetto SCIROCCO Exchange** Serena Mingolla, SCIROCCO Exchange Project Coordinator
11,20	**Il processo di autovalutazione con il tool SCIROCCO** • Introduzione sul processo di autovalutazione nelle 6 ASL pugliesi • Il processo di autovalutazione nella ASL BR EfthimiaPantzartzis, SCIROCCO Exchange Assessment Manager
11,30	**Negoziazione e & Consensus Building** • L'Assessment Manager introdurrà i risultati per ogni dimensione del tool ricercando il consensus per quelle dimensioni che hanno riportato punteggi differenti (tenendo conto delle motivazioni riportate dai diversi Stakeholder) EfthimiaPantzartzis, SCIROCCO Exchange Assessment Manager
13,00	**Conclusioni e riflessioni dei partecipanti sul processo di autovalutazione** (compilazione del questionario finalizzato a migliorare lo strumento) Serena Mingolla, SCIROCCO Exchange Project Coordinator

Annex 3 Self-Assessment Workshop in Barletta Andria Trani LHA - Agenda

Time	Session Title
12,00	**Saluti di benvenuto, obiettivi dell'incontro, presentazione dei partecipanti**
12,10	**Presentazione del progetto SCIROCCO Exchange** Serena Mingolla, SCIROCCO Exchange Project Coordinator
12,20	**Il processo di autovalutazione con il tool SCIROCCO** • Introduzione sul processo di autovalutazione nelle 6 ASL pugliesi • Il processo di autovalutazione nella ASL BT EfthimiaPantzartzis, SCIROCCO Exchange Assessment Manager
12,30	**Negoziazione e & Consensus Building** • L'Assessment Manager introdurrà i risultati per ogni dimensione del tool ricercando il consensus per quelle dimensioni che hanno riportato punteggi differenti (tenendo conto delle motivazioni riportate dai diversi Stakeholder) EfthimiaPantzartzis, SCIROCCO Exchange Assessment Manager
14,00	**Conclusioni e riflessioni dei partecipanti sul processo di autovalutazione** (compilazione del questionario finalizzato a migliorare lo strumento) Serena Mingolla, SCIROCCO Exchange Project Coordinator

Annex 4 Self-Assessment Workshop in Foggia LHA – Agenda

Time	Session Title
11,00	**Saluti di benvenuto, obiettivi dell'incontro, presentazione dei partecipanti**
11,10	**Presentazione del progetto SCIROCCO Exchange** Serena Mingolla, SCIROCCO Exchange Project Coordinator
11,20	**Il processo di autovalutazione con il tool SCIROCCO** • Introduzione sul processo di autovalutazione nelle 6 ASL pugliesi • Il processo di autovalutazione nella ASL FG EfthimiaPantzartzis, SCIROCCO Exchange Assessment Manager
11,30	**Negoziazione e & Consensus Building** • L'Assessment Manager introdurrà i risultati per ogni dimensione del tool ricercando il consensus per quelle dimensioni che hanno riportato punteggi differenti (tenendo conto delle motivazioni riportate dai diversi Stakeholder) EfthimiaPantzartzis, SCIROCCO Exchange Assessment Manager
13,00	**Conclusioni e riflessioni dei partecipanti sul processo di autovalutazione** (compilazione del questionario finalizzato a migliorare lo strumento) Serena Mingolla, SCIROCCO Exchange Project Coordinator

Annex 5 Self-Assessment Workshop in Lecce LHA – Agenda

Time	Session Title
09,00	**Saluti di benvenuto, obiettivi dell'incontro, presentazione dei partecipanti**
09,10	**Presentazione del progetto SCIROCCO Exchange** Serena Mingolla, SCIROCCO Exchange Project Coordinator
09,20	**Il processo di autovalutazione con il tool SCIROCCO** • Introduzione sul processo di autovalutazione nelle 6 ASL pugliesi • Il processo di autovalutazione nella ASL LE EfthimiaPantzartzis, SCIROCCO Exchange Assessment Manager
09,30	**Negoziazione e & Consensus Building** • L'Assessment Manager introdurrà i risultati per ogni dimensione del tool ricercando il consensus per quelle dimensioni che hanno riportato punteggi differenti (tenendo conto delle motivazioni riportate dai diversi Stakeholder) EfthimiaPantzartzis, SCIROCCO Exchange Assessment Manager
11,00	**Conclusioni e riflessioni dei partecipanti sul processo di autovalutazione** (compilazione del questionario finalizzato a migliorare lo strumento) Serena Mingolla, SCIROCCO Exchange Project Coordinator

Annex 6 Self-Assessment Workshop in Taranto LHA – Agenda

Time	Session Title
10,30	**Saluti di benvenuto, obiettivi dell'incontro, presentazione dei partecipanti**
10,40	**Presentazione del progetto SCIROCCO Exchange** Serena Mingolla, SCIROCCO Exchange Project Coordinator
10,50	**Il processo di autovalutazione con il tool SCIROCCO** • Introduzione sul processo di autovalutazione nelle 6 ASL pugliesi • Il processo di autovalutazione nella ASL TA Efthimia Pantzartzis, SCIROCCO Exchange Assessment Manager
11,00	**Negoziazione e & Consensus Building** • L'Assessment Manager introdurrà i risultati per ogni dimensione del tool ricercando il consensus per quelle dimensioni che hanno riportato punteggi differenti (tenendo conto delle motivazioni riportate dai diversi Stakeholder) Efthimia Pantzartzis, SCIROCCO Exchange Assessment Manager
13,00	**Conclusioni e riflessioni dei partecipanti sul processo di autovalutazione** (compilazione del questionario finalizzato a migliorare lo strumento) Serena Mingolla, SCIROCCO Exchange Project Coordinator