Data Diagnostic Tool
“How to use data to optimise services design and delivery”

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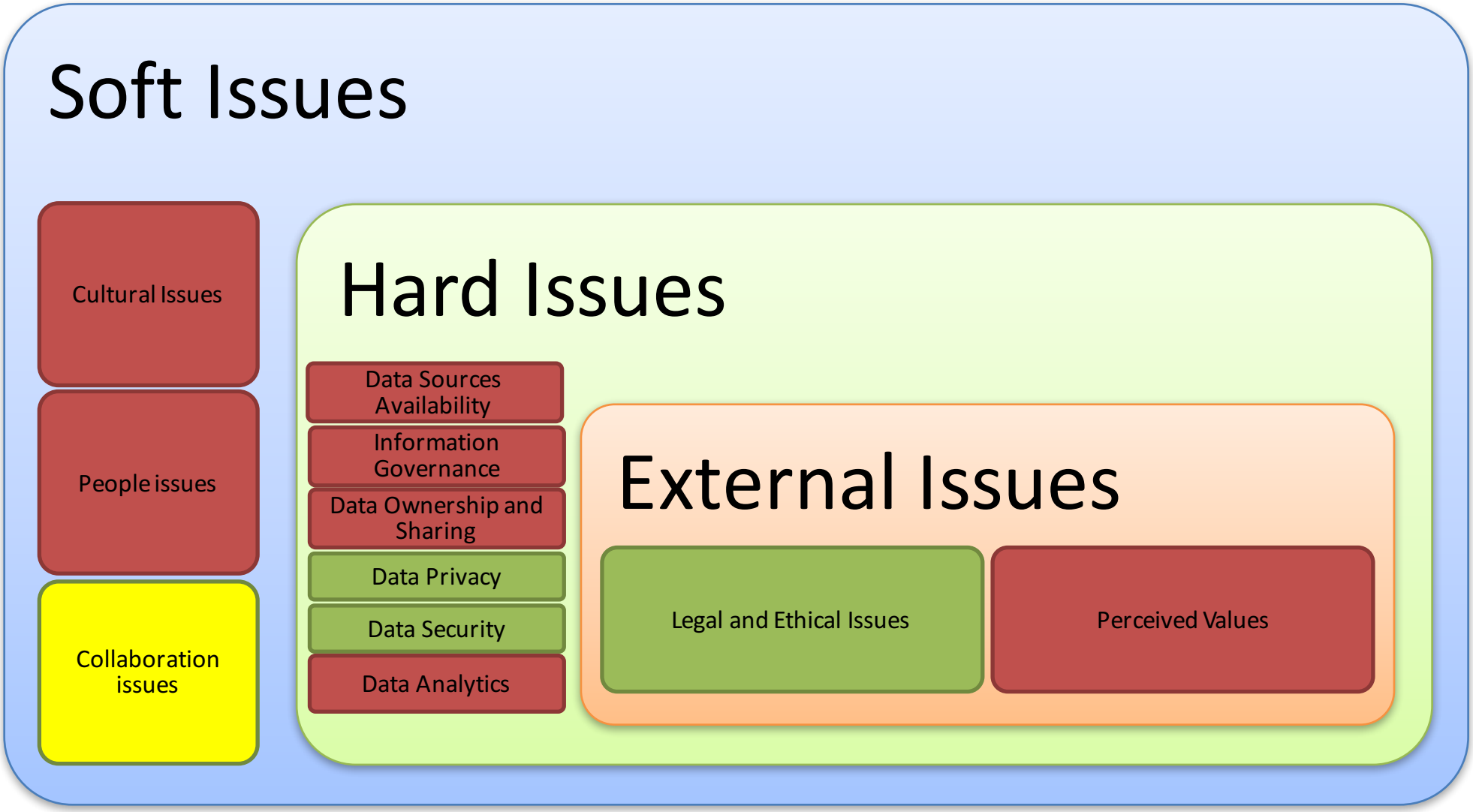
Agenda

- Context For Research
- Data Diagnostic Framework
- Data Diagnostic Tool
- Application of Data Diagnostic

Where are the data driven opportunities create value with CSNs?

Case Studies

Data Diagnostic Framework



Leading Practices

Soft Issues

- Cultural Issues
- People Issues
- Collaboration Issues

Resistance

How to establish a strong culture of using data within your network?

Practices to overcome this barrier

"Political work has to take place first"

1. **Top management support** with clear vision & strategy (**ambitious strategy /'me too'/defensive strategy**)
2. **Create awareness** and market the 'innovative service' concept as innovative approach
3. **Incentivise working closely** with different departments/communities
4. **Find and work collaboratively** with innovative supporters in your service network.
5. **Share best practices** with and among network.
6. My organisation should appoint CIO or CDO who is accountable for an enterprise-wide information governance programme

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Data Diagnostic Tool Demo

Issues/Practices	Assessment Dimensions	Currently we are considering this as	This should be considered as	Gap	Comments
Evaluate the following data cultural issues and practices					
Issues	Resistance issues are a significant challenge towards the design and the implementation of a data service within my organisation	1-Unimportant	5-Very Important	4	
	Cultivating new practices around the use of data is a significant barrier because management mistrust institutional data, measurement, and analytics	5-Very Important 4-Important 3-Moderately Important 2-Of Little Importance ✓ 1-Unimportant	ery Important	4	
Practices	Political work has to take place first before addressing technology	1-Unimportant	5-Very Important	4	
	Top management support with a clear vision and strategy is essential to design and deploy a service	4-Important	4-Important	0	
	My organisation follows an ambitious strategy and leadership role to develop innovative approach in the market	3-Moderately Important	5-Very Important	2	
	My organisation follows 'Me too'/defensive strategy in order not to be "left behind" in data services and resulting in lost opportunities	1-Unimportant	5-Very Important	4	
	My organisation creates awareness of the new innovative data service or services and significant effort has been dedicated by the team to communicating with different departments to resolve any internal conflicts	3-Moderately Important	1-Unimportant	-2	

Cultural Issues | People Issues | Collaboration Issues | Data Sources Availability | Information Governance | Data Ownership | Data Privacy | Data Security | Data Analytics | Legal and Ethical | Perceived Value

Levels of Analysis

Priorities Dashboard → **Overall Gap Assessment** → **Detail Practice Gap Assessment**

- A list of ***high and medium*** issues and leading practices ***that should be considered per dimension***
- Ranking the Highest ***(3,4)***/medium **(2)** scores based on future direction assessment ***"This should be considered as"***

- Gap analysis between the summation scores of ***current*** issues/practices and issues/practices ***to be considered***

- A detail analysis based on the highest to the lowest gap score for the leading practices that need ***to be considered***
- Balance indicator for ***overestimate practices (Score: (-2)- (medium), (-3,-4)- (High)***

Priorities Dashboard

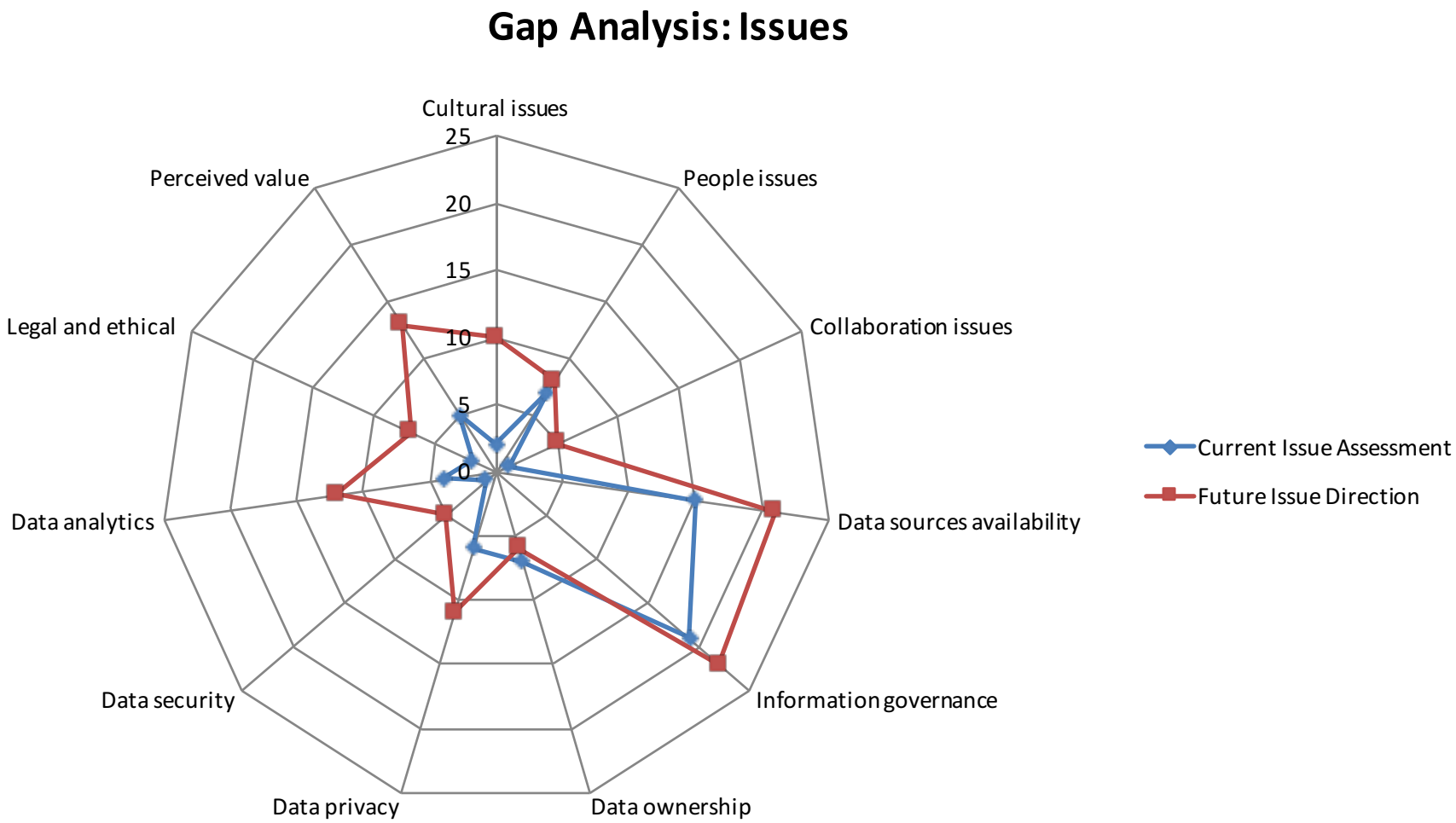
Culture issues	Score
Resistance issues are a significant challenge towards the design and the implementation of a data service within my organisation	5
Cultivating new practices around the use of data is a significant barrier because management mistrust institutional data, measurement, and analytics	5

People issues	Score
Recruiting data scientists with the right skills is a significant challenge towards the implementation of a data service within my organisation	5
Staff turnover is a significant challenge towards the implementation of a data service within my organisation	3

Culture practices	Score
Political work has to take place first before addressing technology	5
My organisation follows an ambitious strategy and leadership role to develop innovative approach in the market	5
My organisation follows 'Me too'/defensive strategy in order not to be "left behind" in data services and resulting in lost opportunities	5
Top management support with a clear vision and strategy is essential to design and deploy a service	4

People practices	Score
Build an information governance council that consists of executive sponsors (including --potentially- CIO, CDO, functional representatives, information governance officer, information security officer, etc. and that has a formal C-Suite owner) for big data project or programme or a formal programme of information/data governance	5
Map key processes and establish a RACI matrix to identify stakeholders who are responsible for managing data, accountable for data, consulted about the data and kept informed via unidirectional communication	5
The team covers soft skills such as interviewing, business analysis, professional skills, public speaking and significant political understanding and good communications	4
Building a cross-functional team consists of a group of experienced employees who have different skills to support the service	3
This team covers IT skills such as database and warehousing skills, data modeling, information management , programming skills (e.g. SQL, JAQL, Python, Java, DataStage Jobs, Ab Initio coding)	3

Overall Gap Assessment



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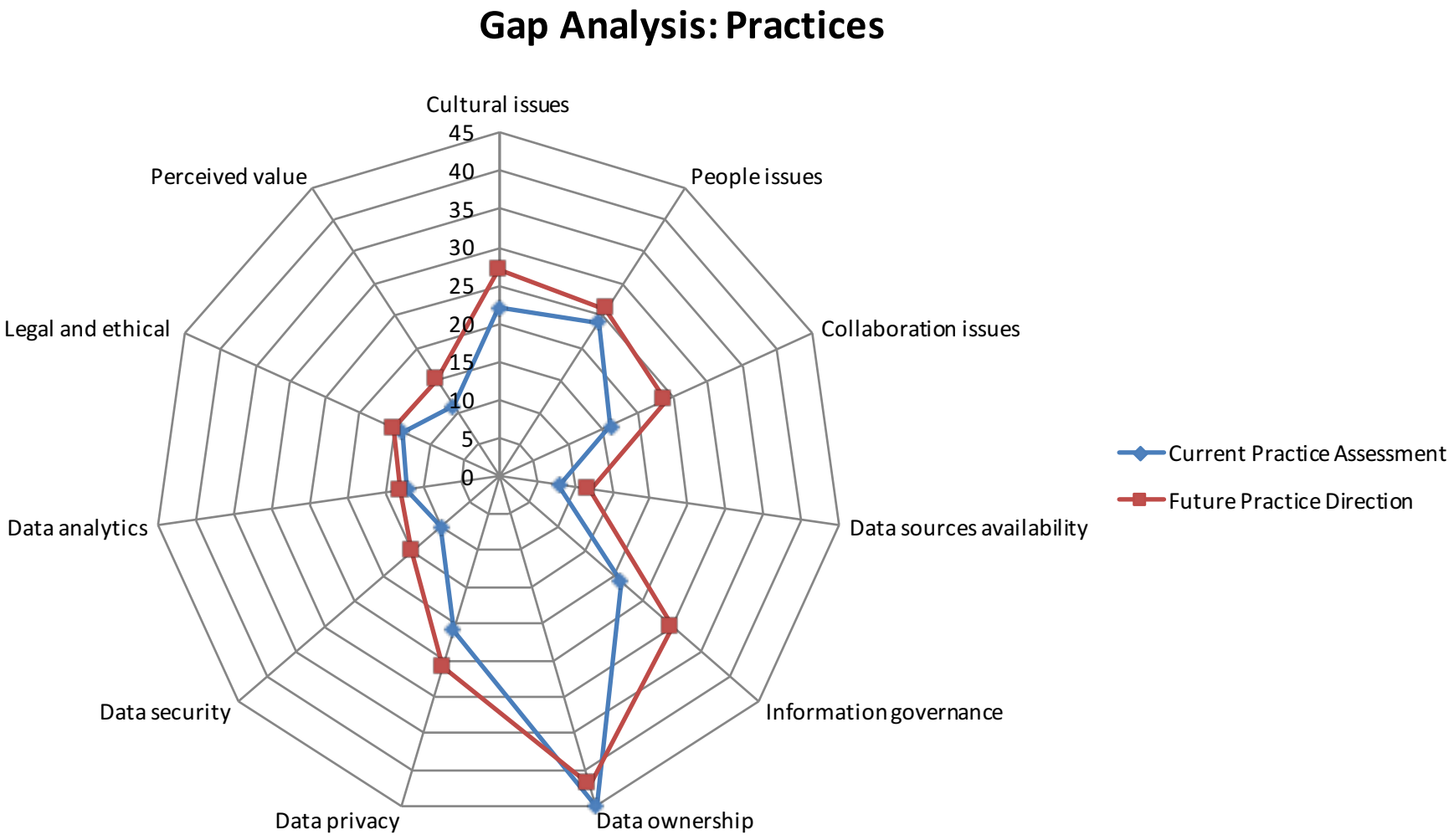
Overall Gap Assessment



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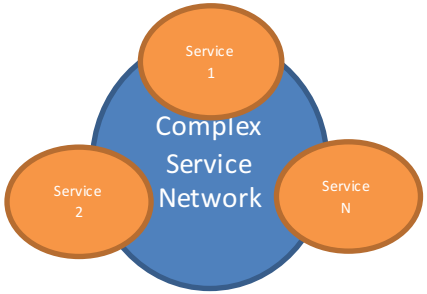
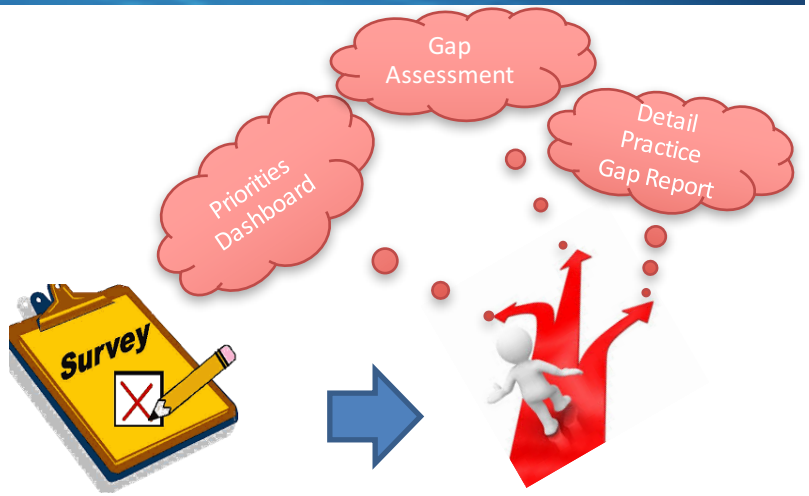
Detail Gap Analysis

Cultural issues	
Practices	Gap score
Political work has to take place first before addressing technology	4
My organisation follows 'Me too'/defensive strategy in order not to be "left behind" in data services and resulting in lost opportunities	4
My organisation follows an ambitious strategy and leadership role to develop innovative approach in the market	2
Find and work collaboratively with innovative supporters: An aligned strategy and deep collaboration with right stakeholders includes your technology providers and innovative customers	1
Top management support with a clear vision and strategy is essential to design and deploy a service	0

People issues	
Practices	Gap score
The team covers soft skills such as interviewing, business analysis, professional skills, public speaking and significant political understanding and good communications	3
Build an information governance council that consists of executive sponsors (including --potentially- CIO, CDO, functional representatives, information governance officer, information security officer, etc. and that has a formal C-Suite owner) for big data project or programme or a formal programme of information/data governance	3
Map key processes and establish a RACI matrix to identify stakeholders who are responsible for managing data, accountable for data, consulted about the data and kept informed via unidirectional communication	3
Building a cross-functional team consists of a group of experienced employees who have different skills to support the service	1
This team covers IT skills such as database and warehousing skills, data modeling, information management , programming skills (e.g. SQL, JAQL, Python, Java, DataStage Jobs, Ab Initio coding)	1

Application- How to be used





An Organisation has a number of services as defined within its Complex Service Network (CSNs)

Data Supports the Services with the CSN

- The Data Diagnostic Survey helps understand barriers and Improvement areas within Data Services.
- Use methods such as Workshop, Interviews for the data collection

The Survey results can be used as input into formulating Recommendations on how to improve your Data Services

"It's an impressively comprehensive survey that touches on a lot of deep and fundamental issues. In my review, I don't see anything that is completely absent"

"I like it, looking forward to the last version"

"This is great and definitely it will guide us to build our data model right "

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Priorities Dashboard: Data Sources Availability Issues

Data sources availability issues	Score
Collecting structured internal data sources for analytics such as Machine-to-machine data (GPS, sensor data, RFID tag, etc.), Enterprise data (sales, order, shipment, marketing, inventory, manufacturing, supply chain and financial information, ERP, CRM, etc.) and web data	5
Collecting existing unstructured internal data sources for analytics such as satisfaction surveys, reports, blogs, various types of web clickstream data and other unstructured data (potentially including image data, voice/VOIP data, scan data, machine data)	5
Collecting external data sources for analytics such as free available data (social media, weather data, web crawled data, open data, etc.), customer provided data, acquired data	5
The degree to which the collected data is sufficient and complete	5
The degree to which the data are reliable and collected from trusted sources	5
Technology capabilities, legacy and Integration Issues: vast amounts of data are collected and stored but mostly are neither integrated nor standardized. The ability to combine data from different sources or systems is challenging	5

Marrying ***the production data*** with the ***diagnostic data*** that comes directly from the labs, . Again, ***this is not there right now, there're no clear plans***

Massive poultry and swine companies that have many different operations and just to help them ***collect the data from their different sites would be beneficial***

we ***don't have enough data and understanding yet to be able to get to predictive analytics***

the completeness of the data, with all the right customer IDs etc. It's hard for us to kind of relate ***that data to anything meaningful. , if we, say take use case of pork, I'm not sure how many pork customers use our diagnostic software. Whether the dataset will be complete or not, I don't know***

so the key is ***how to get that correct data to the right person***, in our company, to assist the customer

Technology perspective ***would the connectedness of the labs to the internet, if you're not connected to the internet, what would you do? So it's a common scenario in so many labs across, not in the U.S., if you go to Africa or Asia-Pacific***, it's a **big challenge**

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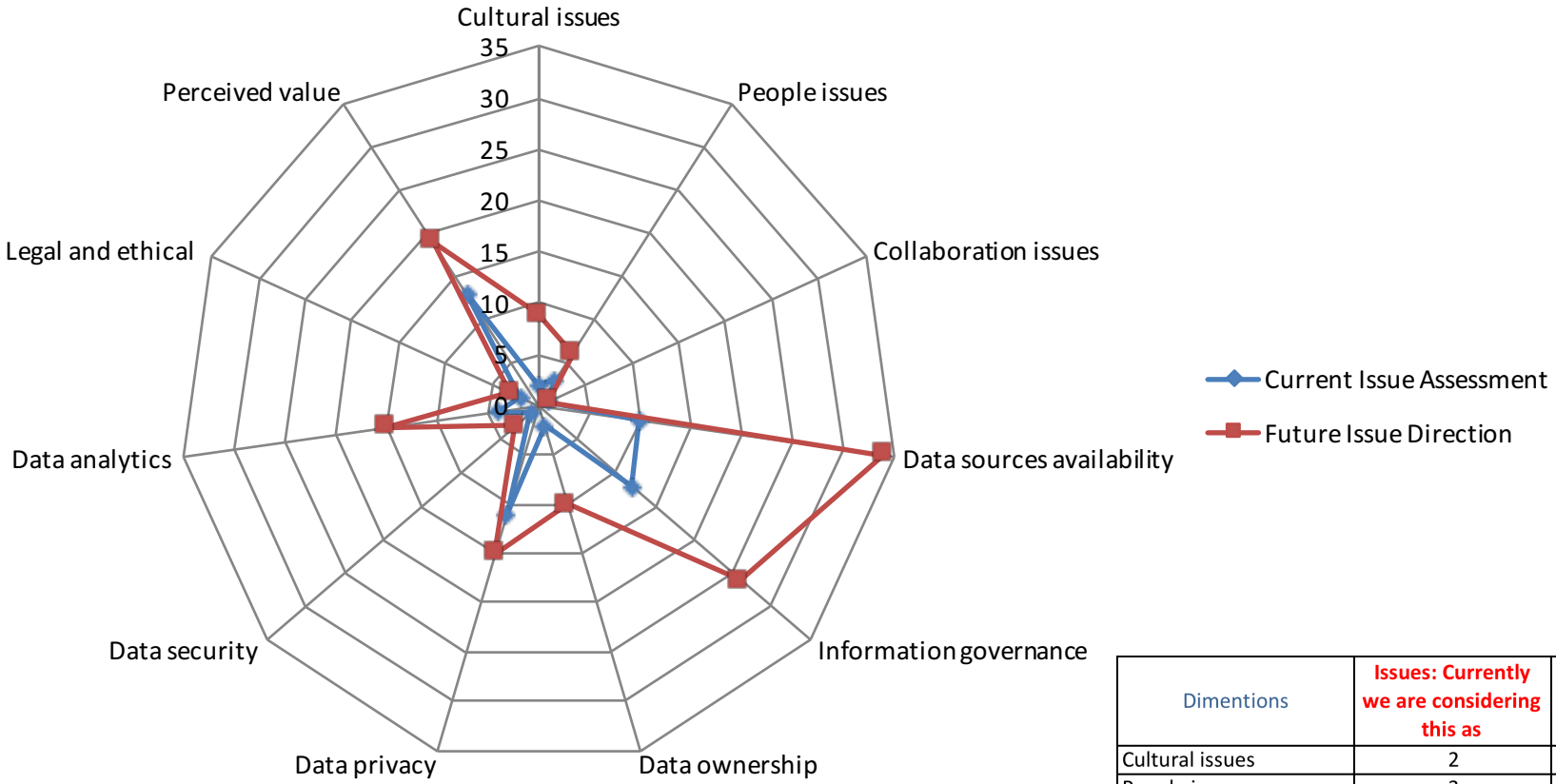
Zoetis Gap Assessment: Issues

Gap Analysis: Issues



Dimentions	Issues: Currently we are considering this as	Issues: This should be considered as
Cultural issues	2	9
People issues	3	6
Collaboration issues	1	5
Data sources availability	10	34
Information governance	12	26
Data ownership	2	10
Data privacy	11	15
Data security	1	3
Data analytics	4	15
Legal and ethical	2	3
Perceived value	13	19

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Questions

Forthcoming Webinars

Date 14:30hr GMT	Topic	Invited speaker
April 11th	Mapping Ecosystems: Identifying Service Innovations. ***TOOL***	Prof. Andy Neely
May 9th	Supplying innovation: unlocking innovative behaviours in the supply chain	Dr. Jingchen Hou
June 13th	Facilitating Co-Creation in Living Labs: The Josephs Study	Katherine Greve
July 18th	Service in the Platform Context: a review of the state of art	Xia Han
September 12th	Enterprise KPI's – Aligning metrics across complex service networks	Prof Andy Neely
October 3rd	Critical Incidents in complex services contracts: human causes and means of prevention	Chara Makri
November 14th	Tools Webinar – Data Diagnostic Tool	Mohamed Zaki
December 12th	**Feedback from the Frontline: Engaging Front-Line Employees in Service Contracts**	**Florian Urmetzer**

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