



The 33rd IPMA World Congress

27.-29.11.2024 - CAPE TOWN, SOUTH AFRICA
AT DHL STADIUM

From data to insights: A roadmap for project managers

33rd IPMA World Congress 2024

Carl Marnewick & Annlizé Marnewick



UNIVERSITY
OF
JOHANNESBURG



**Projects and
data**

Big data – 6V's

- Volume of data
- Velocity of data
- Variety of data
- Veracity of data
- Variability of data
- Value of data

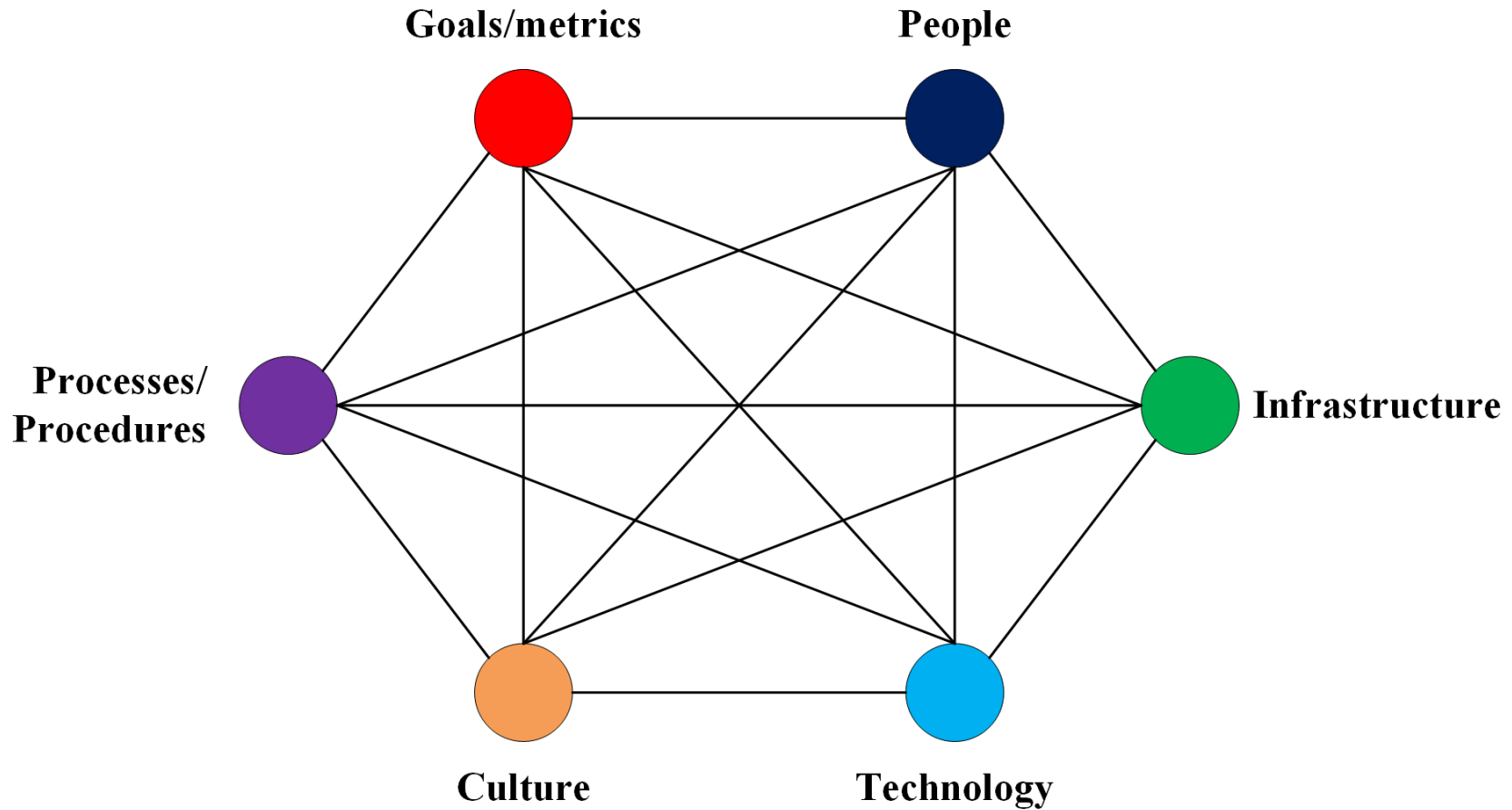


Big data process

Process	Description	CRISP-DM	KDD	SEMMA	TDSP
Data Generation	Big data originates from various sources, including social media platforms, sensors, IoT devices, digital transactions, mobile devices and more.	X			X
Data Acquisition	Organisations collect data from diverse sources, both internal and external, to build their datasets. This process involves capturing data in real time or batch mode and storing it in data repositories or data lakes for further processing and analysis.	X	X		X
Data Storage	Big data requires robust storage solutions capable of handling large volumes of data efficiently.				
Data Processing	Data undergoes pre-processing and cleansing to ensure its quality and usability for analysis. This involves tasks such as removing duplicates, handling missing values, standardising formats and transforming data into a suitable structure for analysis.	X	X	X	X
Data Analysis	Data analysis involves applying various techniques and algorithms to uncover patterns, correlations, trends and insights within the dataset.	X	X	X	
Insights Generation	The insights derived from data analysis are used to inform decision-making, optimise processes, identify opportunities, mitigate risks and drive innovation within organisations.	X	X	X	X
Deployment and Action	Organisations deploy the insights generated from big data analysis into their operations, products, services and strategies to drive tangible outcomes and value.	X	X		X

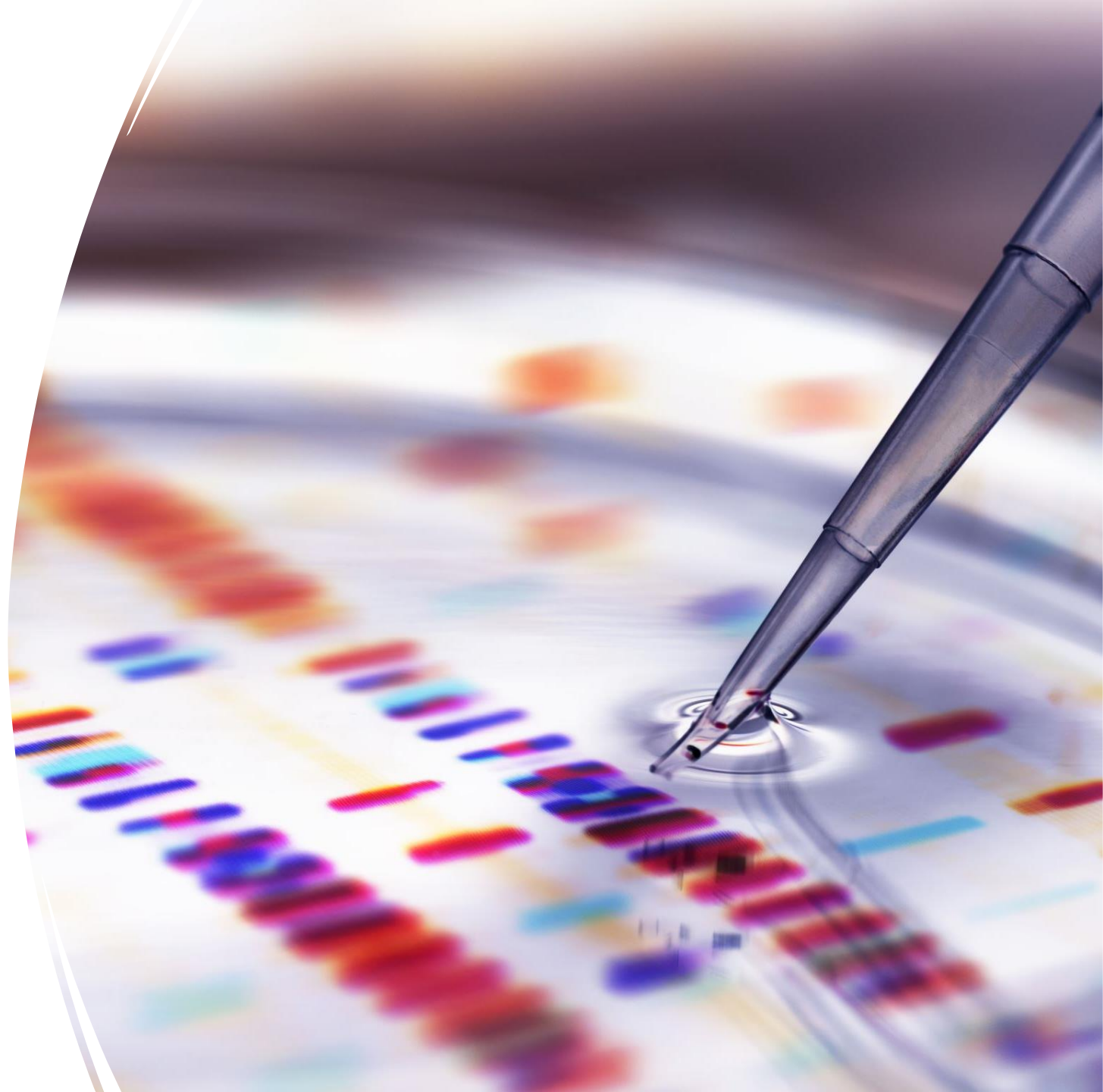


Theoretical lens: Socio-technical system



Research question

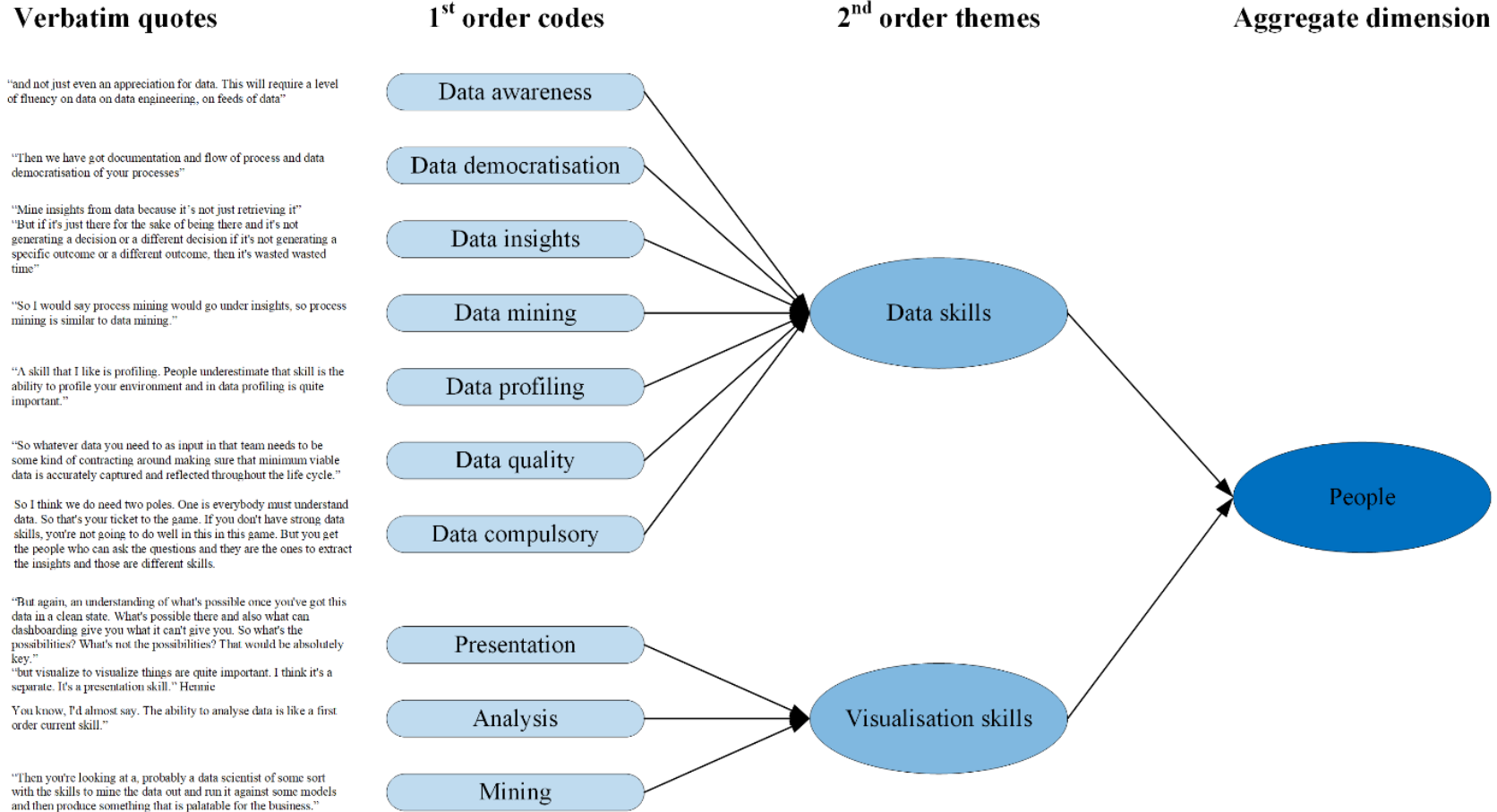
What are the required socio-technical components to gain insights from big data?



Focus groups



Socio-technical system: People



Socio-technical system: Technology

Verbatim quotes

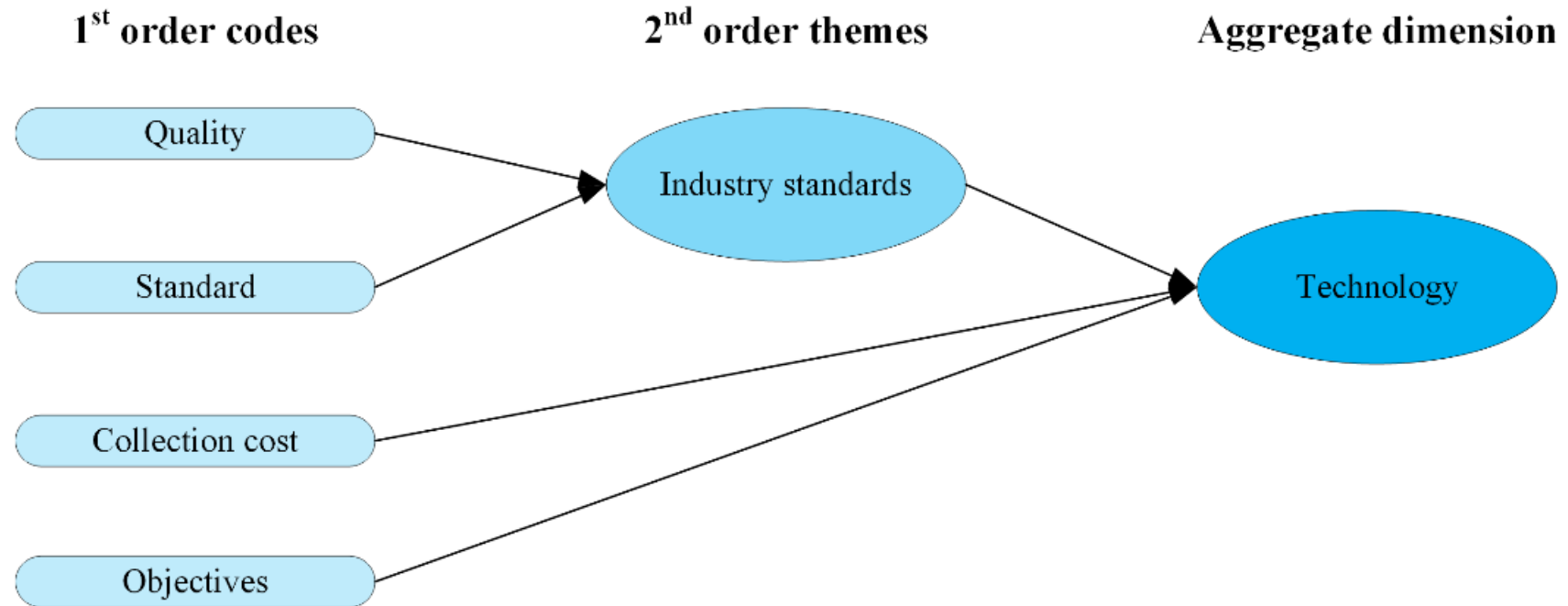
“So whatever data you need to as input in that team needs to be some kind of contracting around making sure that minimum viable data is Accurately captured and reflected throughout the life cycle.”

“So you have to have standards. This is enough to or inference or draw inferences from so. So we have JIRA for instance, if there's not a uniform way of using it to a degree. The data only makes sense for one project at a time, so you need to have some standard metadata that you can correlate.”

“I mean it's the same with rest of organisations data that you need to have proper labeling and almost a data taxonomy so that you stick to that standard and it comes back to the standard that André has mentioned.”

“There is a view to collect data, but there's a cost to collecting data and it's not just the operational cost of producing and collecting the data. There's even the delays it may add for people analyzing the data later on, and that's not often understood very, very well.”

“If you don't get the objectives right, the rest will be a problem and the other way around as well that if you don't have the right level of skill to know what to look for in terms of the domain, understanding the project, the solution and the stakeholder or the decision maker. Then you're also not going to get the right insight. So it's there, there's a strategic component to data and its the strategic thinking.”



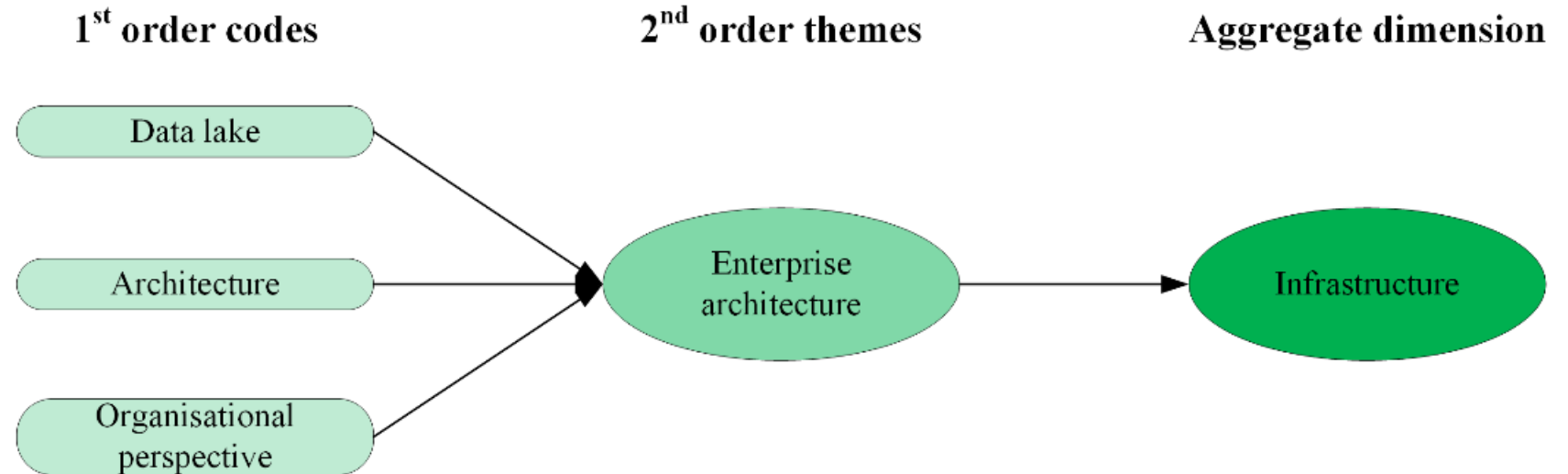
Socio-technical system: Infrastructure

Verbatim quotes

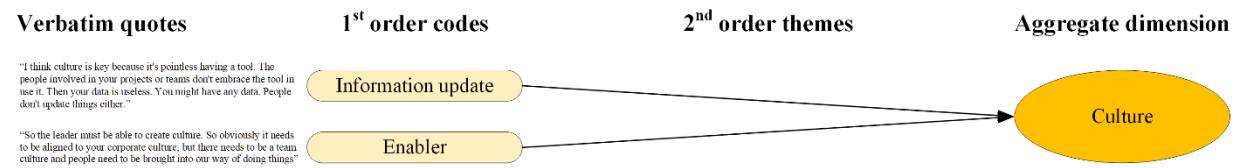
“So the underlying what what is supporting a data lake. I guess and that’s where the modeling tools come in.”

“And then if you’re smart about it, you think of your architecture. If you got the data lake and on top of it, you’ve got for instance at the node and you create your views for you that you’ve got integrated views where I can have the necessary project information plus the necessary finance and other information. If it’s project finance and so on, and I can draw them together and I can actually start making the links between things and gaining insights and then but the infrastructure itself should be enterprise infrastructure because the project team should not maintain the platform. The platform should be maintained by IT people.”

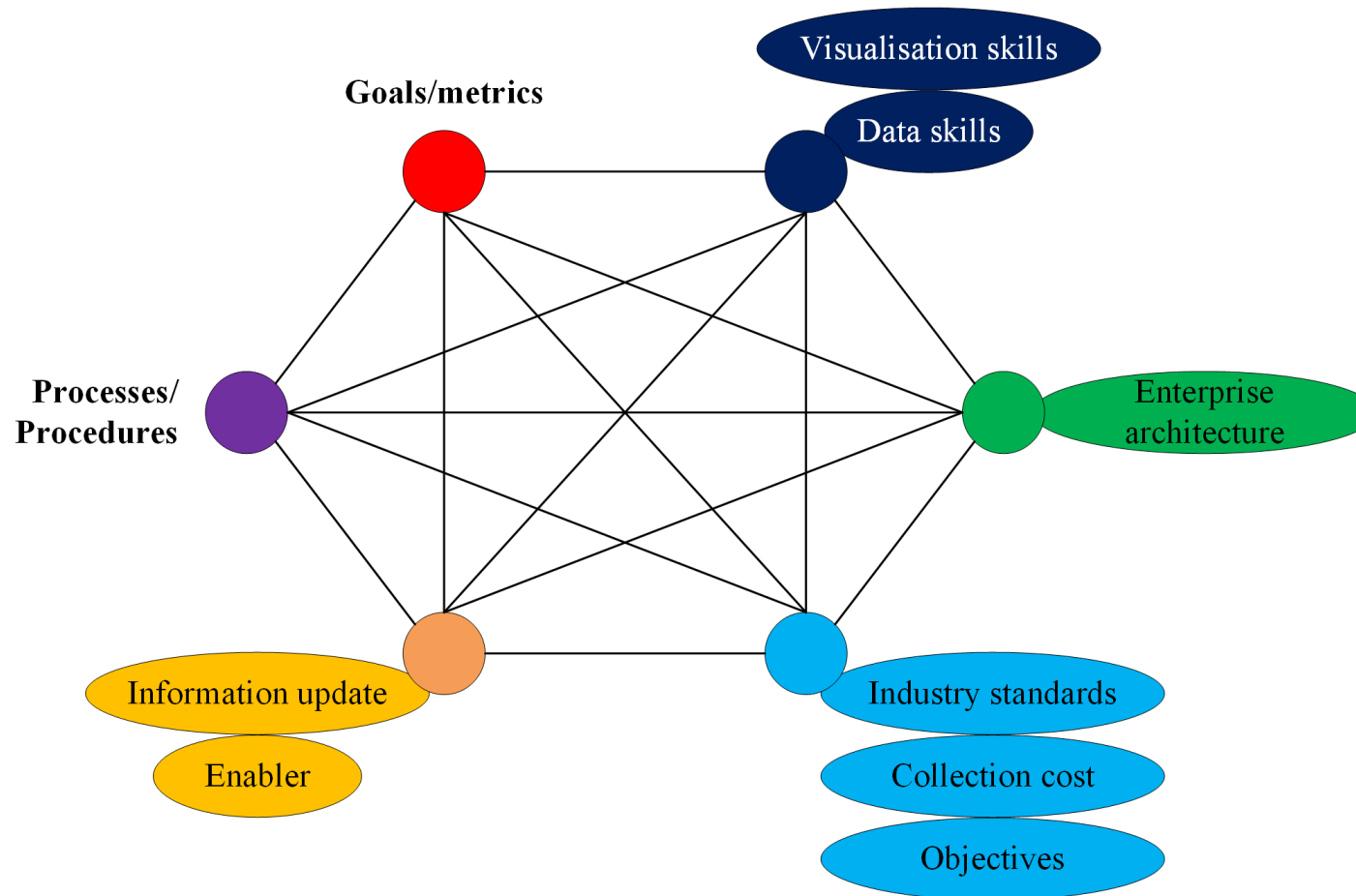
“Because if I want to draw inferences, if I want to see how this project influencing the rest of the organization, it’s better to have them all together and it’s better from an infrastructure cost point of view.”



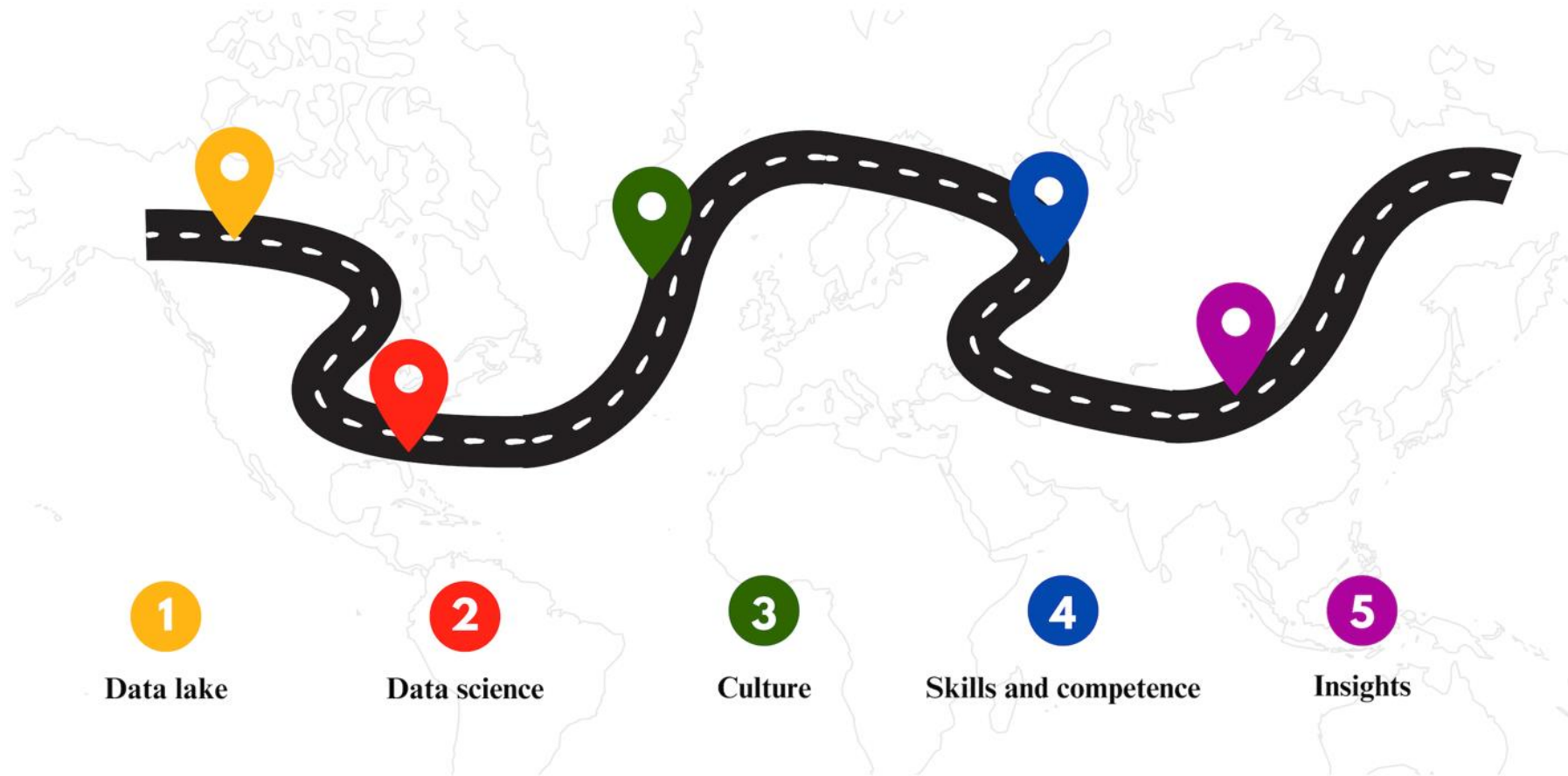
Socio-technical system: Culture



Socio-technical view of data



Roadmap





Questions