



Fundamental Concepts in Data Insight:

Digital Transformation & Data Insight

Fundamentals for a General Audience





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Digital Transformation & Data Insight

- Overview
 - WB. What have we covered so far?
 - Reflection: The topics so far
- Data Insight Rewards & Risks
 - What are the barriers to adopting insight practices?
 - What are the strategic advantages from data insight?
 - What are the risks of data insight projects?
 - When will data insight be rewarding?
- Group: Data & Digital Transformation
 - WB. Risks & Rewards
 - What are the organizational components of an insight culture?
 - WB. The Organizational Structure for Digital Transformation
- Data Insight Organizational Questions
 - What is a data democracy?
 - What do workers want from a data democracy?
- Reflection: How do you implement a digital transformation?
 - Roundtable
 - WB. Roundtable
- Case Study: When will data insight help?





WB. What have we covered so far?





WB. What have we covered so far?





Reflection: The topics so far

- data science & analysis
- artificial intelligence & machine learning
- big data
- programming & automation
- data skills & mindsets
- data culture & organizational challenges
- deployment challenges & the cloud
- risks, rewards & challenges





What are the barriers to adopting insight practices?

- technical
 - data preceeds insight
- cultural
 - evidence-based decision-making
- organizational
 - silos, gate-keeping, ...
- techno-organizational
 - democratising data access
- legal & ethical
 - GDPR, law
 - ethical data collection

What are the strategic advantages from data insight?





What are the risks of data insight projects?

- ROI is hard
- data systems need to be in place (complex, expensive,...)
- technical culture (data democracy)
- expect 8/10 projects to fail to deliver ROI
- experimentation required -> software adaption





When will data insight be rewarding?

- automation/software rewards clear...
- for strategy, insight small pc of decision-making
- human decision making likely already high quality
- ROI when = small pc * high value of pc
 - optimizing "last few percent" of decision making which has vhigh value
- speculative methods still likely necessary in many cases
 - (lack of data, lack of measurables, many open problems)





Group: Data & Digital Transformation

- Why is Data important?
 - evidence-based reasoning
 - strategic advantages
 - organizational objectives
- What are the risks from data insight?
 - Project/ROI
 - Legal/Ethical
 - Organizational
- How do you account for these risks?





WB. Risks & Rewards





What are the organizational components of an insight culture?

- data democracy
- proactivity & scepticism
 - experiment, fail-fast or fail-well
 - prototyping
- accountability
- experimental culture





WB. The Organizational Structure for Digital Transformation





WB. The Organizational Structure for Digital Transformation





What is a data democracy?

- elite access to data vs. democratic access
- specialist-only vs. all roles
- self-serve vs. silo'd





What do workers want from a data democracy?

- managers and executives
 - self-service app
 - visuals and charts
 - point-and-click
- front-line workers (police, call centre, retail staff)
 - data insight naturally integrated to functional apps
 - eg., call centre dashboard displays customer details & history
 - eg., police search dashboards displays relevant local predictive crime statistics
- data analysts & scientists
 - business intelligence platforms
 - cloud querying interfaces
 - visualization tools
 - notebooks





Roundtable

- What are the organizational risks?
- How do you mitigate the organizational risks?
- What mindsets and roles does a digital transformation require?
- What cultural shift does a digital transformation require?
- How do you implementation a digital transformation?





WB. Roundtable





WB. Roundtable





Reflection: How do you implement a digital transformation?





Reflection

- The Importance of Data
- Strategic Advantages from Data Science & Big Data
- Group Roundtable: Organizational Risks & Challenges
 - Leadership & Culture
 - Data Citizens, Dreamers, Doubters
 - Infrastructure





Case Study: When will data insight help?

- Local Policing -- what areas should police focus on?
 - high-quality decisions likely exist but quite delayed by human operation
- can we accelerate signals of novel crime occurrences / changes?
 - clustering on crimes...
- what data systems do we need?
- how long will it take to build? what's the ROI?
 - potentially high if many systems exist...

