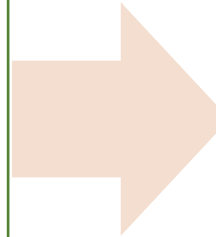


# The Centre for Data-driven Innovation in Manufacturing (CDIM)

*The Big Idea: Can the very successful approaches to data, both technical and cultural, in sectors such as investment banking and Big Tech, be transplanted into manufacturing?*

Data platforms such as SecDB at Goldman Sachs and Athena at JP Morgan have been very successful in enabling a culture of quants and developers, who have access to large amounts of data, can explore this data quickly and then rapidly develop and deploy algorithms to solve business problems. Companies such as Amazon take a similar data-enabled approach.



Manufacturing lags behind – data is siloed in spreadsheets, ERP and PLM systems. There is no easy access to analytics and development platforms. Necessary skills are not present in the workforce.

*CDIM will explore how a culture of data-driven innovation can underpin agile, effective deployment of digital technologies in manufacturing – demonstrated through R&D on specific applications chosen by our industrial partners*

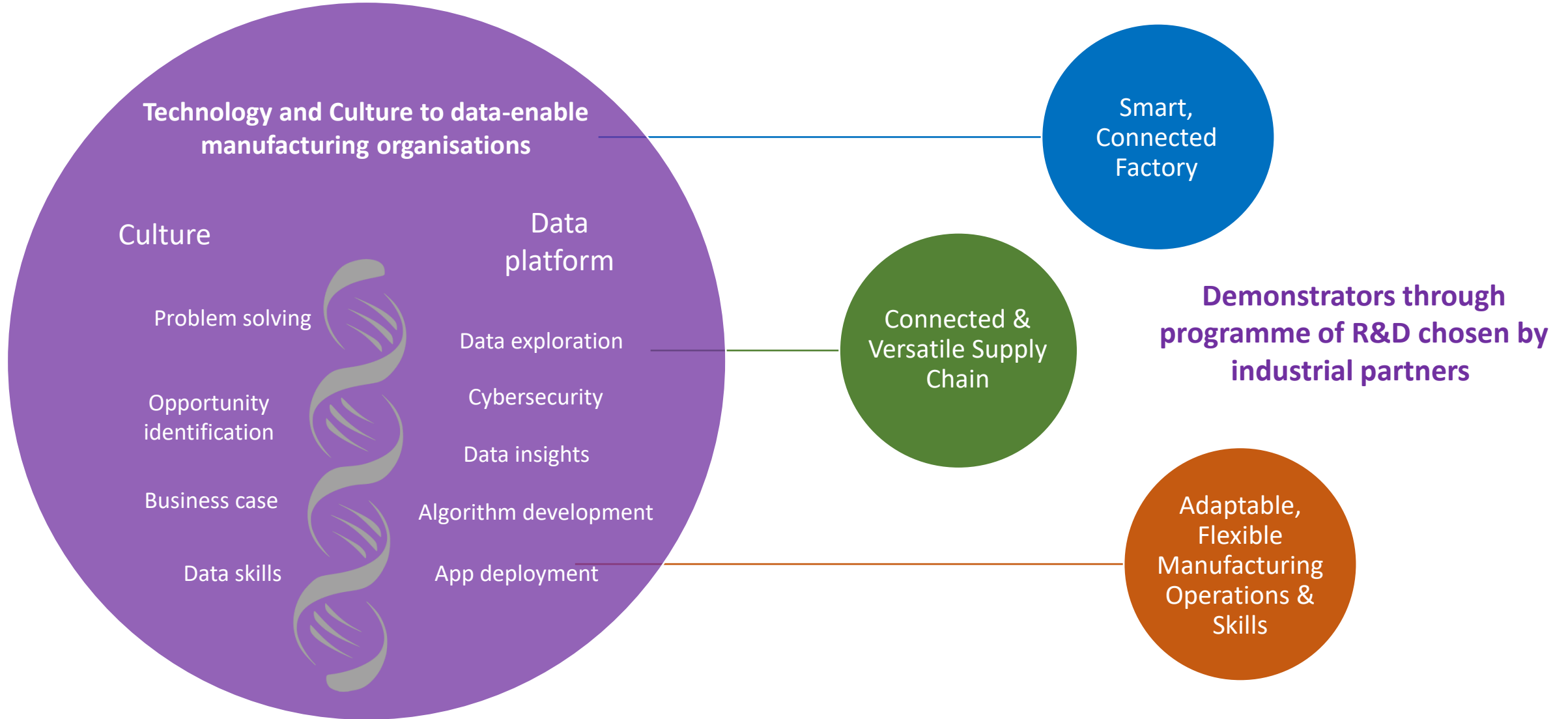


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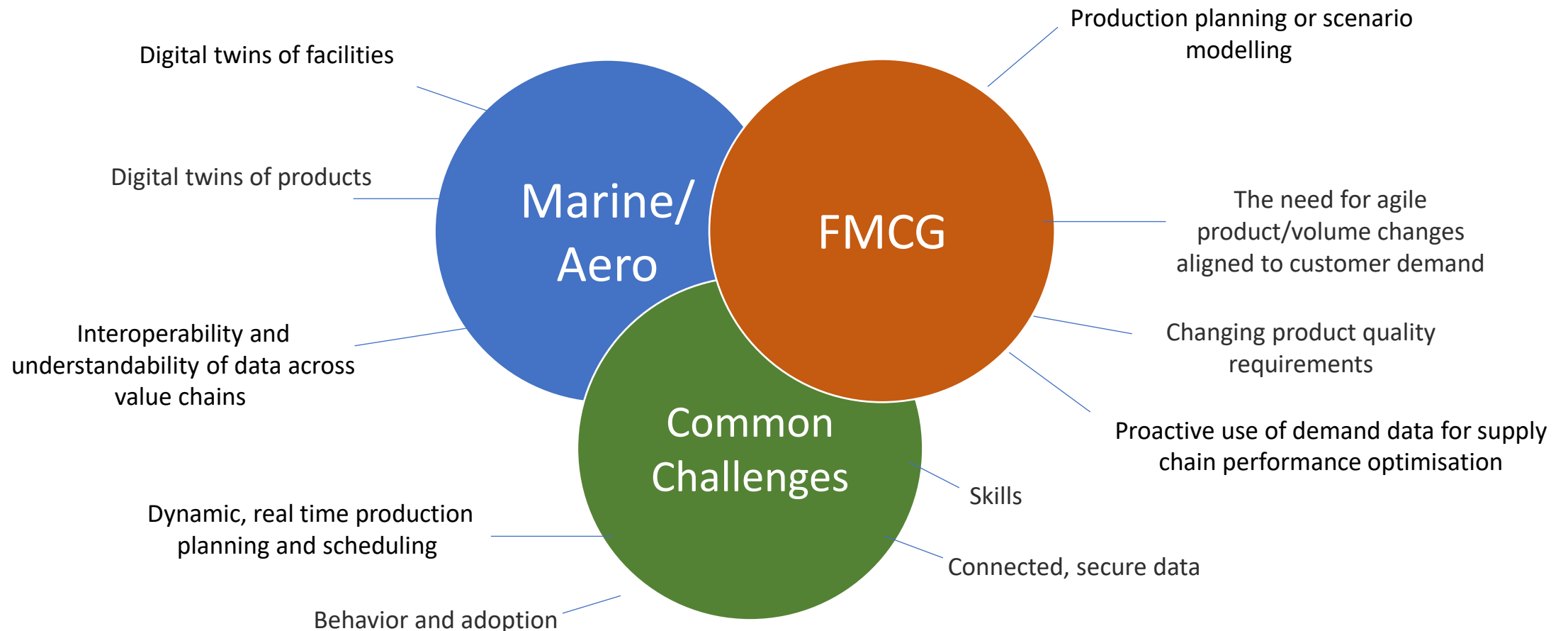


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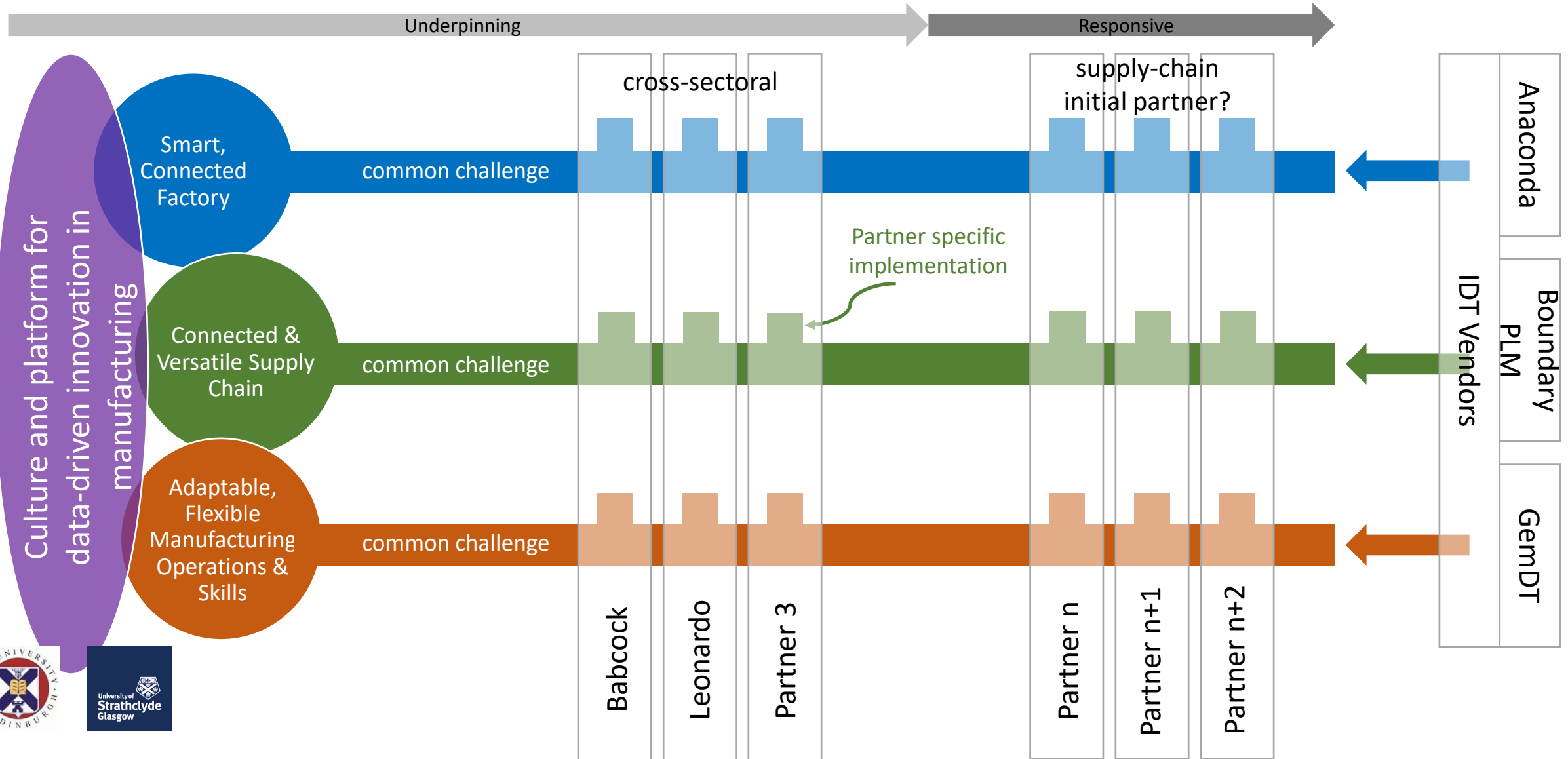
# The Centre for Data-driven Innovation in Manufacturing: Themes



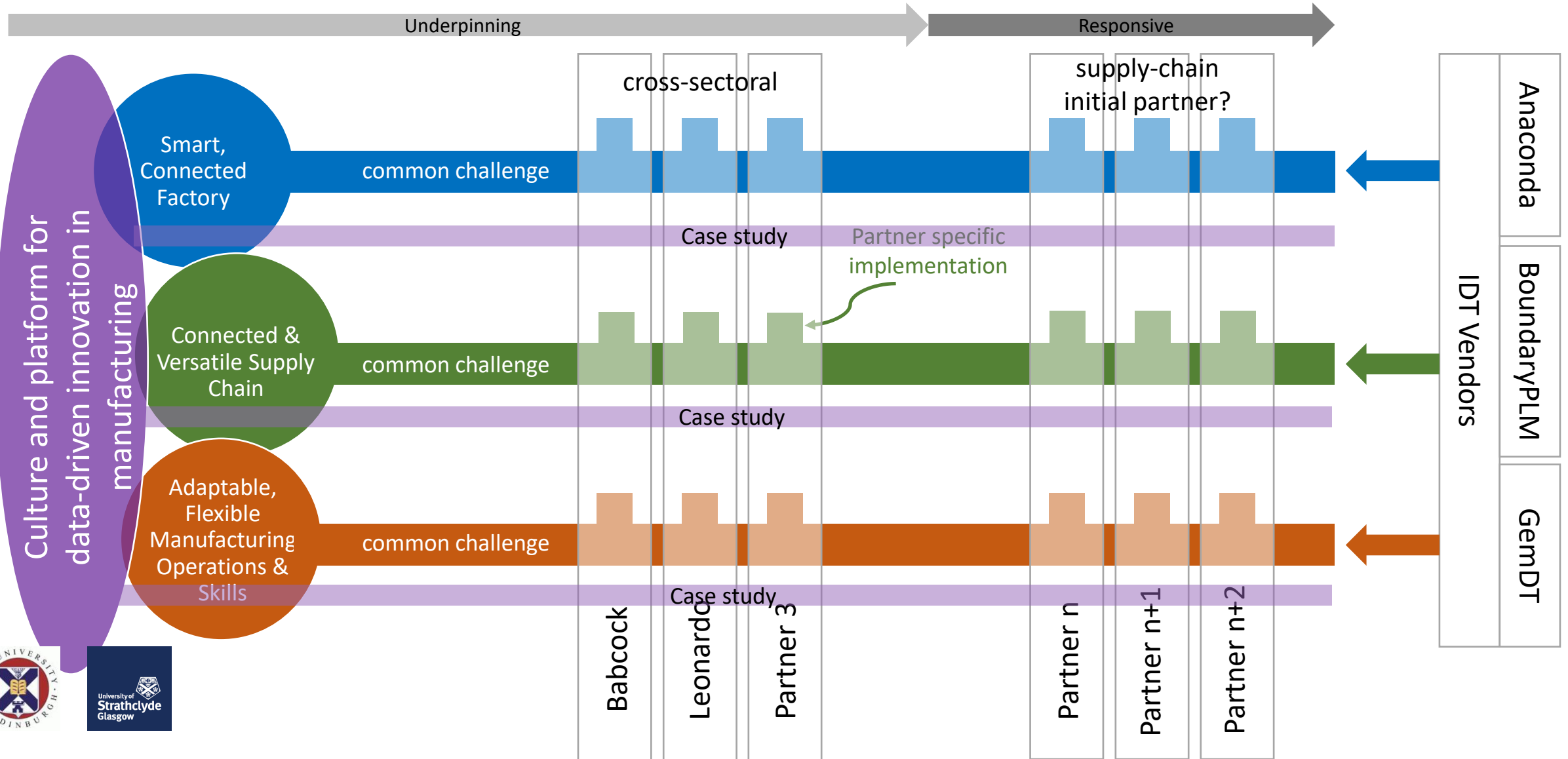
# The Centre for Data-driven Innovation in Manufacturing: Target Sectors & Example Challenges



# The Centre for Data-driven Innovation in Manufacturing: Approach



# The Centre for Data-driven Innovation in Manufacturing: Approach



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# The Centre for Data-driven Innovation in Manufacturing: Confirmed Partners



**Boundary PLM**



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# Case-studies suggestions from industry partners

Culture and platform for data-driven innovation in manufacturing

Smart, Connected Factory

common challenge

Dynamic, real time production planning & scheduling  
Digital twins of facilities or processes  
Digital twin for modular products  
Capacity planning  
Connected secure data

Connected & Versatile Supply Chain

common challenge

Improved decision making through analytics & AI

Adaptable, Flexible Manufacturing Operations & Skills

common challenge

Simulation & understanding of real work using data from people & industrial systems, efficient transfer of trial results to the workplace

Safety & human-machine interaction – ergonomics, sensing, big data and psycho-social effects

Flexible NPI

Choice of actual case-studies driven by industrial partner requirements



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# Manufacturing Made Smarter Research Centres: Call Outline

- EPSRC Funding of £20m for 4 or 5 Manufacturing Made Smarter Research Centres (£4m - £5m per centre)
- Objective - to increase adoption of Industrial Digital Technologies in UK manufacturing
- Industrial investment (in-kind or cash) of 25% of EPSRC investment initially, rising to 60% over project lifetime
- Industrial partners co-create industrially relevant research programme with academia in following themes:

Adaptable, Flexible  
Manufacturing Operations &  
Skills

Connected, Versatile Supply  
Chain

Smart Connected Factory

Societal & Cultural Change  
(managing disruption of IDT's)

*University of Edinburgh led bid focuses on how a culture of data-driven innovation and data platforms can underpin agile, effective deployment of digital technologies in manufacturing - demonstrated through R&D on specific applications chosen by our industrial partners from the themes above*

*We are seeking further manufacturers, SMEs and IDT providers to join our existing consortium*



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