



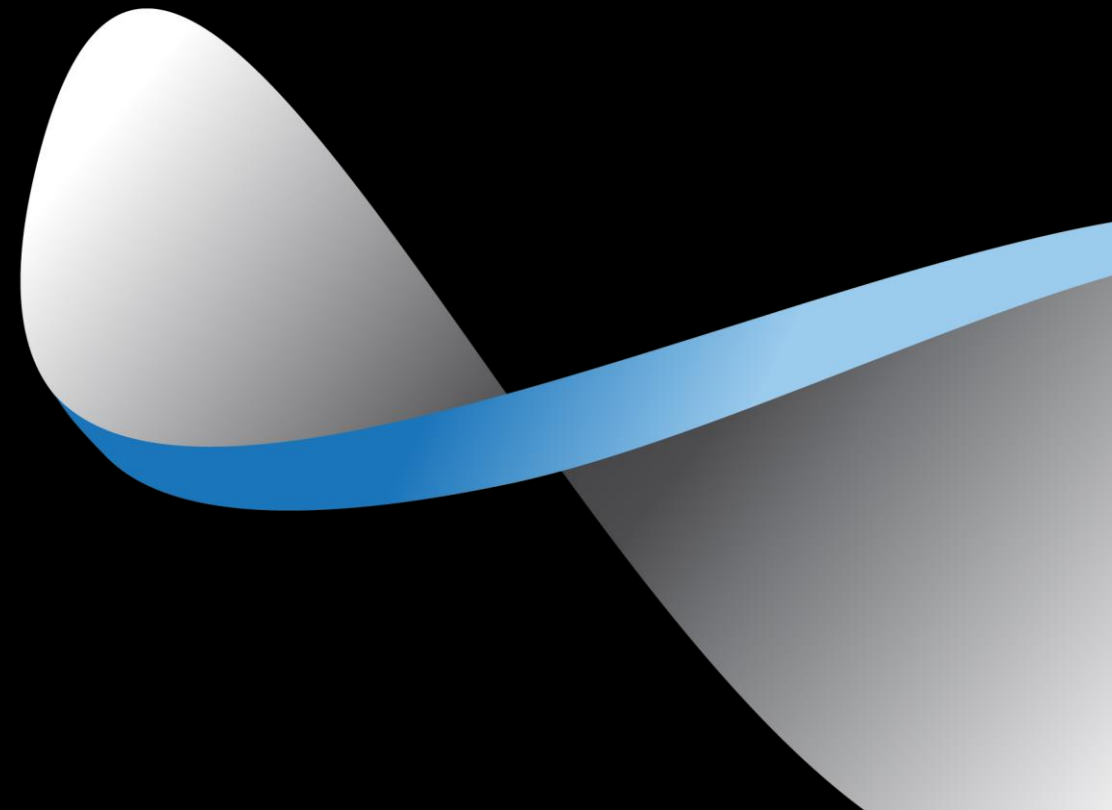
THE UNIVERSITY
of EDINBURGH



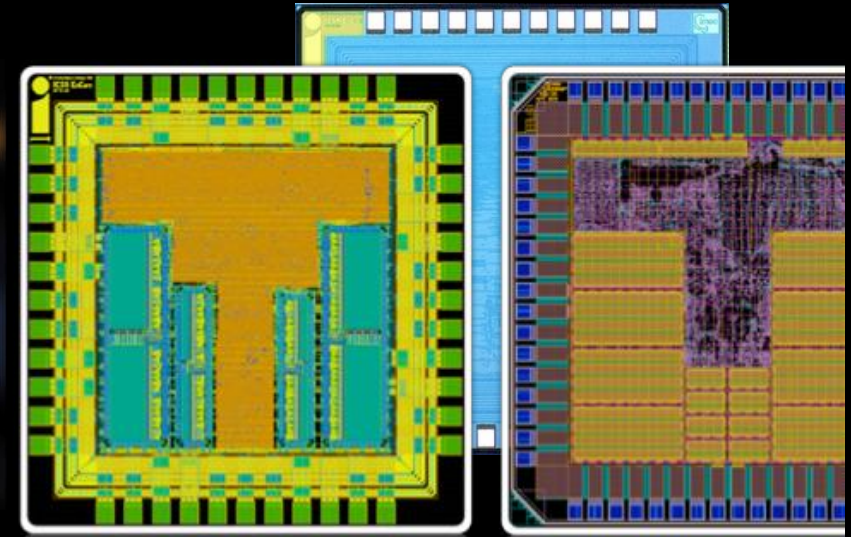
BayesCentre

Learning = Change + Risk

Michael Rovatsos



Our Strengths



Interaction

- Speech & Language
- Robotics
- Design

Data Science

- Machine Learning
- Databases & Unstructured
- Privacy, Security & Trust

Systems

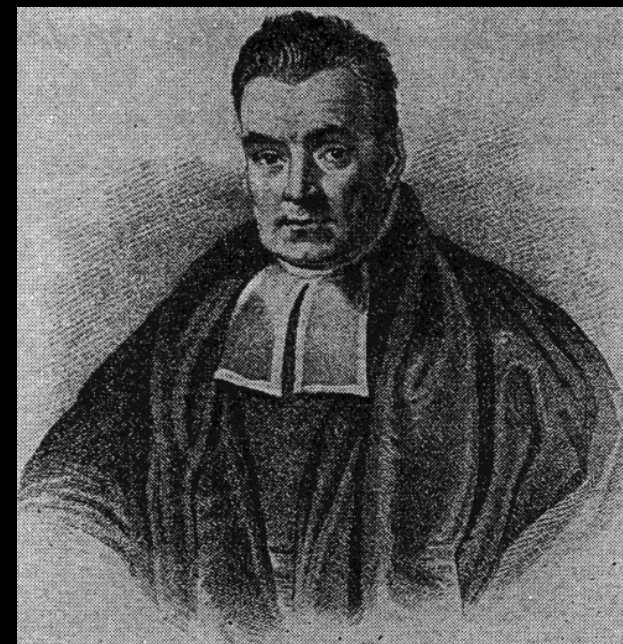
- Compilers & Architectures
- Networking & Communications
- High-Performance & Supercomputing



The Bayes Centre

- Innovation Centre for Data Science and AI
- Collaborative, multidisciplinary, disruptive
- Research, Education, and Innovation

Thomas Bayes



c.1701-1761

$$\underbrace{P(\textit{hypothesis}|\textit{observation})}_{\textit{posterior belief}} \propto \underbrace{P(\textit{observation}|\textit{hypothesis})}_{\textit{likelihood}} \times \underbrace{P(\textit{hypothesis})}_{\textit{prior belief}}$$



The University

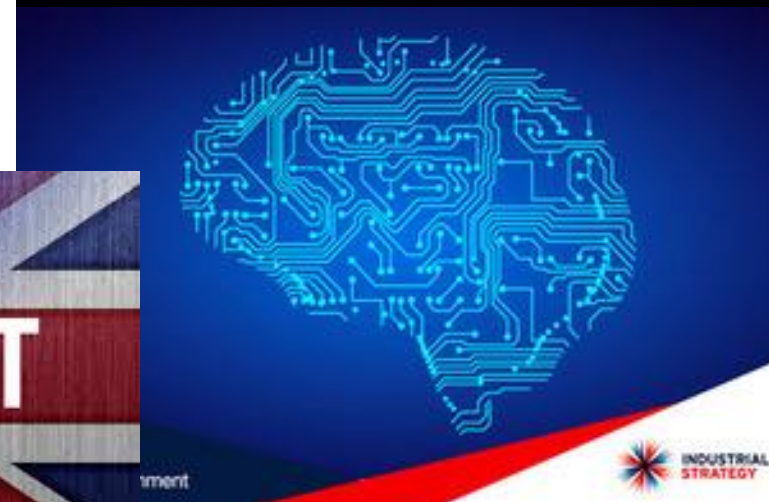
- Four-hundred year old institution
- Twenty Schools in three Colleges plus Central Services
- Research, Education, and Administration

Under Pressure

REF Research
2021 Excellence
Framework

NSS

National Student Survey



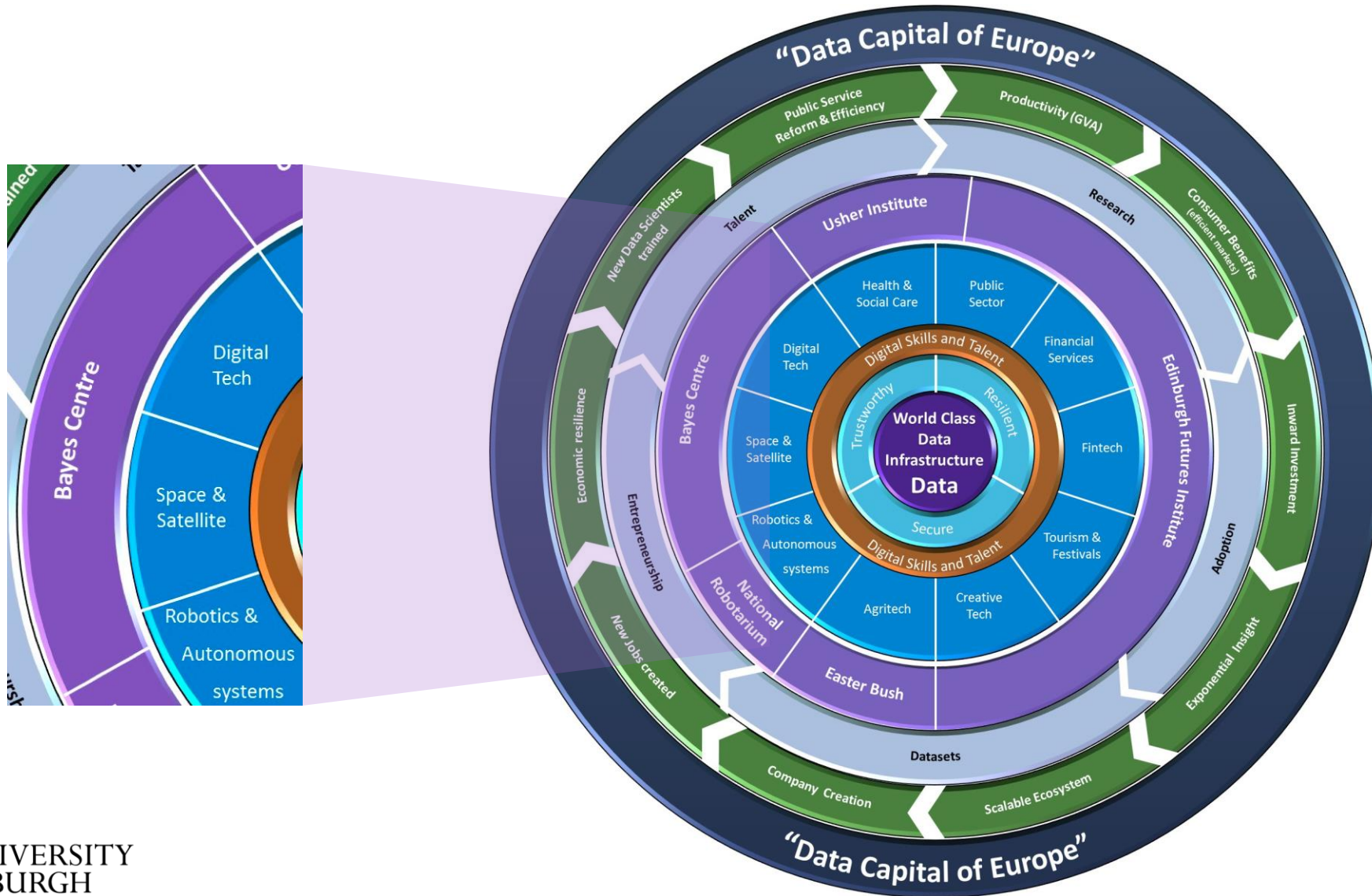
TEF Teaching
Excellence
Framework

GCRF
Global Challenges Research Fund

Under Pressure



CityDeal and Bayes





The Bayes Centre

Edinburgh Parallel
Computing Centre

Edinburgh Centre
for Robotics

External R&D and
Innovation Groups

Design Informatics

Commercialisation &
Innovation Teams

The Bayes Centre

- Upstream projects, software developers and hardware engineers
- Working with sectors and disciplines to make data work for people

International Centre for
Mathematical Sciences

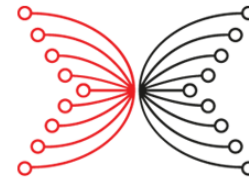
Centres for
Doctoral Training

The Data Lab

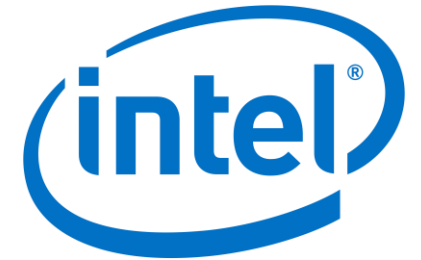
The Alan
Turing Institute

AI & Blockchain
Accelerator

External Groups



INPUT | OUTPUT



nesdigital

NVISO



ORBITAL
MICRO
SYSTEMS

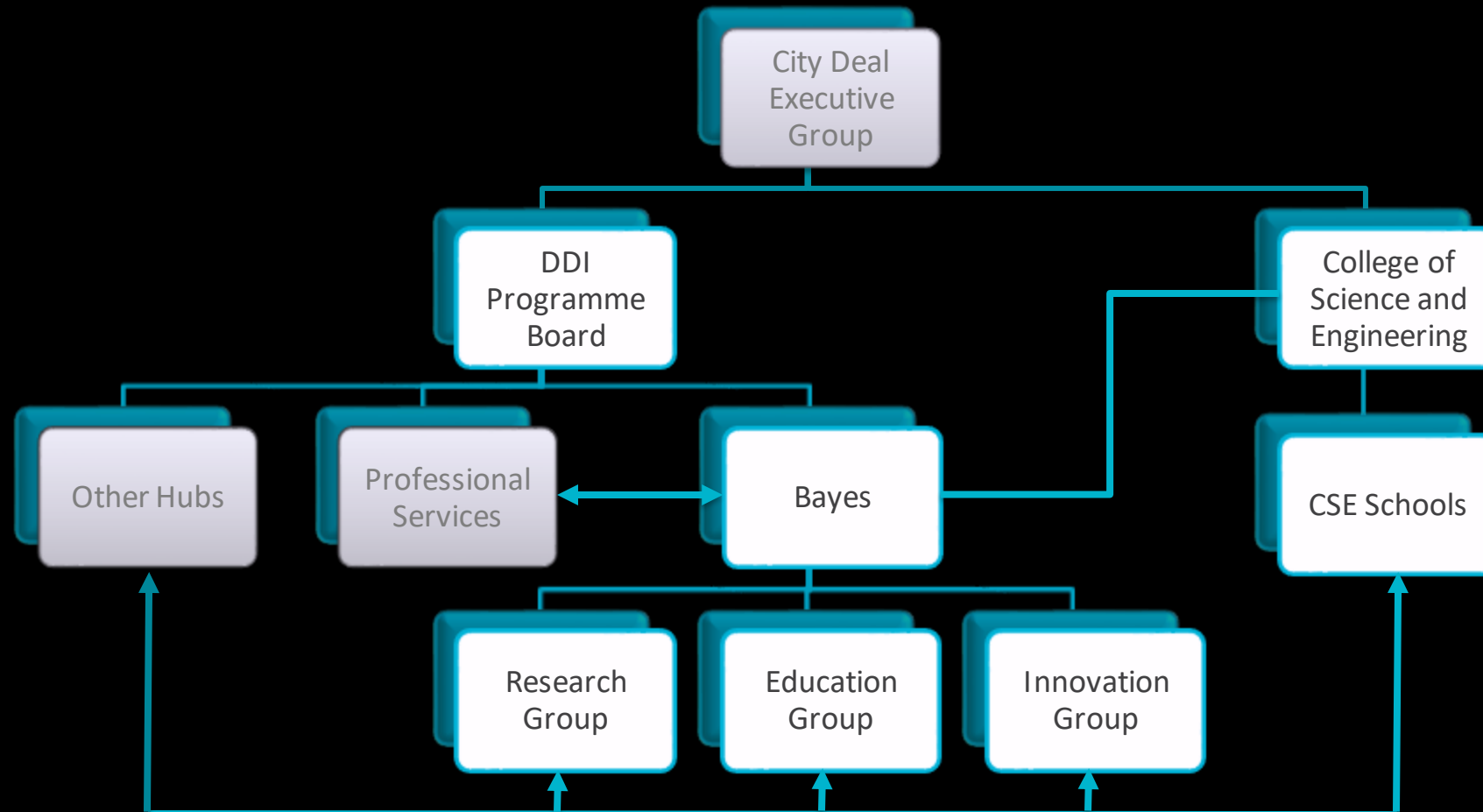


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The Role of Bayes



Bayes Relationships



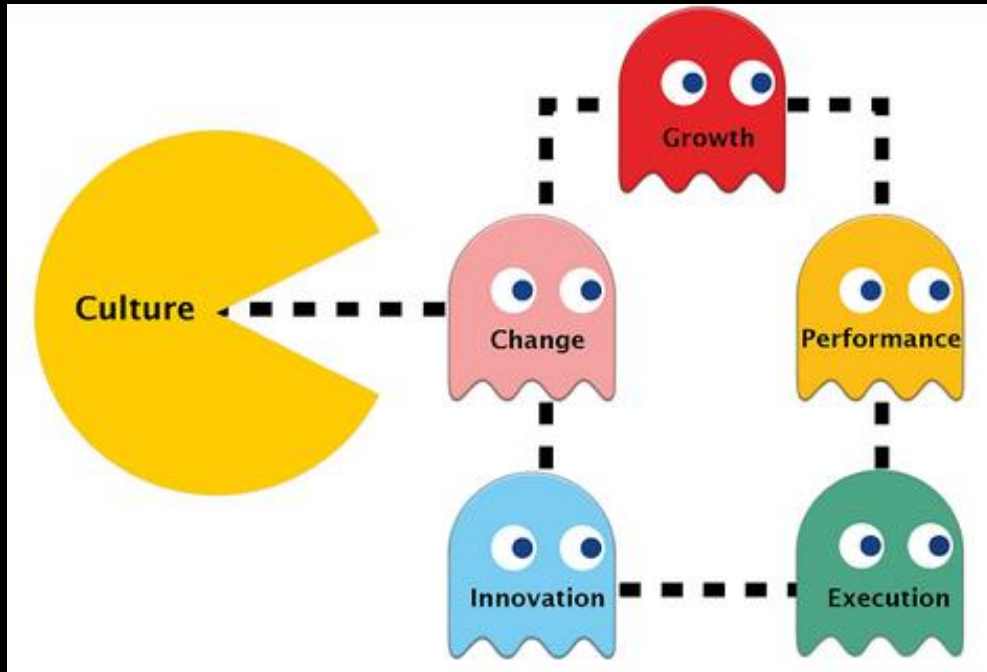


The Good News



- Tremendous interest from external organisations and colleagues
- Only one desk left to sell to external partners after three months
- Lots of good will helped us through initial (inevitable) chaos
- Helpful colleagues are to be found everywhere in the institution

The Not So Good News



- Old disciplinary silos are not going to go away that easily
- Opportunities still unclear to many colleagues
- Collegiality can be undermined by internal politics
- Transparency, accountability, and incentivisation could be improved

Learning = Change + Risk



- We are trying new things we haven't attempted before
- We will get things wrong, but need to learn from failures
- To encourage people to take risks, there need to be clear rewards
- We still have a lot of work to do to articulate those

(and I'm left wondering: don't we have colleagues who are experts in all of that?)

Thank you!

www.bayes.ed.ac.uk

@BayesCentre

Bayes in DDI (work in progress)

