Learning = Change + Risk

Michael Rovatsos
The Opportunity
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

BayesCentre

THE UNIVERSITY OF EDINBURGH
Thomas Bayes

\[ P(\text{hypothesis}|\text{observation}) \propto P(\text{observation}|\text{hypothesis}) \times P(\text{hypothesis}) \]

- posterior belief
- likelihood
- prior belief

c.1701-1761
The University

- Four-hundred year old institution
- Twenty Schools in three Colleges plus Central Services
- Research, Education, and Administration
Under Pressure
Under Pressure
CityDeal and Bayes
100,000 with formal certification

50,000 new jobs

1,000 organisations benefit from DDI

400 data start-ups

£2.5bn-5bn

Boost the economy

Gross Value added over 15 years
The Bayes Centre

- Edinburgh Parallel Computing Centre
- External R&D and Innovation Groups
- Commercialisation & Innovation Teams
- Centres for Doctoral Training
- The Alan Turing Institute
- Edinburgh Centre for Robotics
- Design Informatics
- International Centre for Mathematical Sciences
- The Data Lab
- AI & Blockchain Accelerator

The Bayes Centre

- Up to 600 students, scientists, designers and external partners
- Working across sectors and disciplines to make data work for people
External Groups

carbomap
HUawei
input output
Intel
learning emergence
nesdigital
NVISo
Orbital Micro Systems
RBS The Royal Bank of Scotland
Sas
wayra.

THE UNIVERSITY OF EDINBURGH
The Role of Bayes

Bayes

Internal & External Partners

Talent & IP

TRADE Objectives

Delivery

CityDeal Opportunities

TRADE Objectives

Internal & External Funding

Challenges & Sector Insight

Strategy & Planning

Programmes & Projects

Engagement & Outreach
Bayes Relationships

City Deal Executive Group

DDI Programme Board

Other Hubs
Professional Services

Bayes

Research Group
Education Group
Innovation Group

College of Science and Engineering

CSE Schools
Bayes Functions

Community Engagement
- building relationships
- matchmaking
- engaging ecosystem

Business Development
- pipeline management
- opportunity scouting
- business planning

Programme Management
- activity capture
- progress monitoring
- outcome reporting

Programme Development
- portfolio design
- demand matching
- strategic alignment

- Bayes Coms, Events, Coordination team WITH
  - Bayes Partners
  - Schools and Colleges
  - Other DDI hubs
  - Staff and Students

- Bayes BDEs & Data Technologists WITH
  - External organisations
  - Delivery partners
  - Funding agencies
  - Investors & donors

- Bayes Programme Manager and Directors WITH
  - Schools and Colleges
  - Support Services
  - DDI Programme Board

- Bayes Subgroups and Executive WITH
  - Schools and Colleges
  - Bayes Partners
  - DDI Programme Board

- Bayes Partners
- Schools and Colleges
- Other DDI hubs
- Support Services
- DDI Programme Board

- Schools and Colleges
- Support Services
- DDI Programme Board
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)