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Real Life IT

John Beckford

Loughborough University, 3rd May 2012

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Real Life IT

All the right notes,
not necessarily in the right order!
Eric Morecombe

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Who am I?

- PhD in Management Science (Hull)
- Visiting Professor, Dept. Of Information Science
- Fellow of the Cybernetics Society
- Member of the Institute of Management Services
- Fellow of the Royal Society of Arts
- Author of ‘Quality’ (Routledge, 3rd Edition, 2010)
- 60 + Papers and Articles, numerous ‘talks’
- Member of EIEG
- Lead Researcher, Interdependency, NIP, HM Treasury

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Why do I do this?

- The Passion
  - Deeply dysfunctional organisations
  - At the limits of established thinking
  - Improvement will only arise from innovation
  - Most money spent on IT is wasted!

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How did I get here?

- Career Pathway
  - Banker
  - Internal consultant
    - Organisational and Process Analysis
    - Management problem solving
  - Research – PhD
    - Management Science
    - Managerial Cybernetics
  - Research based consultancy

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Why is it interesting?

- The Challenge
  - Academics see the Consultant
  - Clients see the Academic
- My Approach
  - Treat the world as a laboratory
  - Demonstrate the power of ‘thinking’
    - Intractable problems
  - Create a virtuous (learning) cycle

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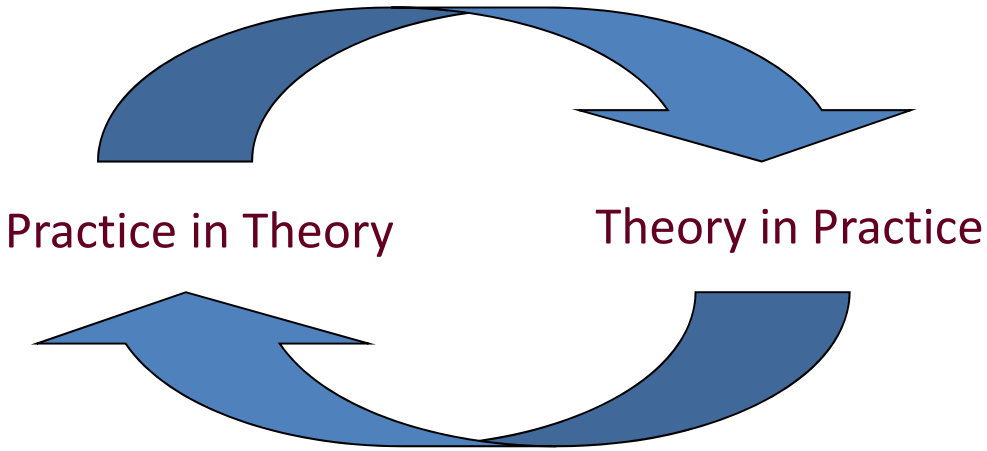
Virtuous Learning Cycle



Cycle of Reflection

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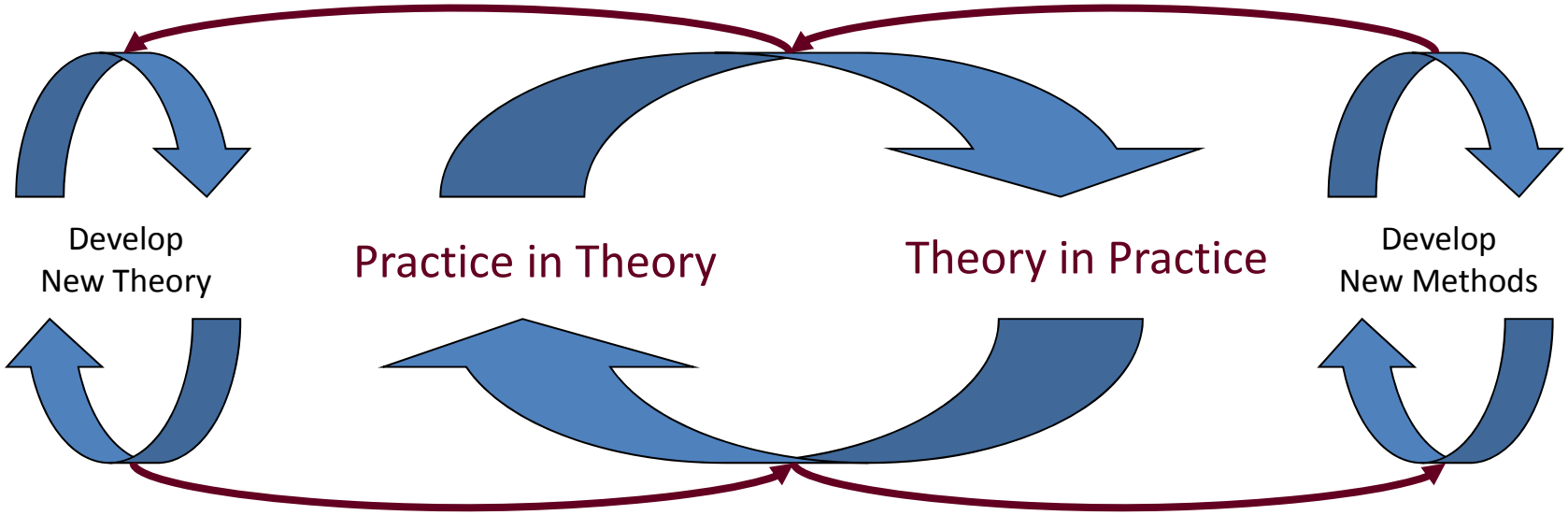
Virtuous Learning Cycle



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Who do I do it for?

- GNER, Arena, Hoverspeed, St. Regis Paper, Alpha Trains
  - organisational viability
- Northern Rail, National Express, Fusion21
  - business information for business transformation
- Astra Zeneca, RBS
  - research project performance management
- Parcelforce, Praska Teplarenska, Aviance
  - business performance management
- A H Marks, Innospec, HSBC, SAP
  - chemical research, fuel additive research, identifying high performers, product development
- InHealth, Aylesford
  - business performance modelling
- The Congregation of the Sisters of Nazareth
  - global business planning, IT strategy
- HM Government, BIS, DfT, Treasury
  - Systemic Risk and Opportunity in Infrastructure

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The Challenges?

- Conventional approaches are failing
  - ‘More of the same’ is not working!
  - Look at the economy!
- Increasing demand for ‘new’ thinking
  - Greater willingness to engage
  - Reputation, experience, demonstrable success
  - Sustainability (viability) agenda
- Finding the scientific skills and knowledge
- The opportunities are out there!

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Challenges

- Achieving claimed benefits
- Delivering value for money
- Dealing with complexity
- Defeating the sceptics
- Demonstrating the value of information

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If these statements are true:

- 80% of SAP clients disappointed in:
  - Benefits attained
  - Measurability of benefits
  - User competency
- 90% of IT projects do not return real benefit
- 40% fail completely
- McKinsey
  - two thirds of CIOs admit that budgets don't have to be defended
- Morgan Stanley
  - between 2000 and 2002 companies threw away over $130 billion of their IT capital expenditure
- HBR
  - 'IT doesn't matter'

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If these statements are true:

then somebody somewhere
MUST be doing something wrong

or, maybe, we are valuing
and focusing on the wrong things!

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IT/IS conventions

- Any organisation commissioning an IT/IS project will typically
  - measure the cost of:
    - hardware, software, configuration, customisation, training, business disruption
  - capitalise it all
  - measure the payback through:
    - reduced headcount, increased availability, better compliance, improved reporting, reduced ‘clicks’, improved appearance, better toys
  - hold nobody fully accountable for the difference
  - believe that IT/IS is a ‘necessary evil’ and seek to minimise the costs it imposes on the organisation

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IT/IS conventions

- Many people might be happier with:
  - The latest software
  - A blackberry
  - A smart phone, tablet, i-pad
  - A faster laptop
  - A wireless lan
  - A 3g card
  - A colour printer
  - A flat screen
  - A big screen
  - Even a big, flat screen
- But
  - How much more productive, efficient, effective will they be?
  - How much better will the 'customer' be served?
  - How much better will they be able to do their jobs?

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Not VERY!

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IT/IS conventions

- Often all we get is a faster, more efficient way of making the same mistakes
- These mistakes individually cost us less to make and we can make more of them more rapidly
  - An increase in productivity?
- The total cost of all the errors is greater than it was before!

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IT/IS unconvention

INFORMATION

is more important

than TECHNOLOGY

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IT/IS unconvention

- The truth seems to be:
  - The COSTS and PAYBACK are all measured in terms of the software, the toys and the people
  - The BENEFITS are all in the information!
- But we don't measure the VALUE of the information!

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Developing Thoughts

- How often do we hear:
  - "We don't have enough……."
  - "We don't have the right ……."
  - "How can I make a decision with…."
  - "What we need round here is a better information system"

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Developing Thoughts

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- Truth is most managers are overwhelmed with data

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  - "We don't have enough……."
  - "We don't have the right ……."
  - "How can I make a decision with…."
  - "What we need round here is a better information system"
- Truth is most managers are overwhelmed with data
  - BUT data is NOT information
  - Data has no context, no connectivity, no meaning
  - It only becomes information when we can do something with it!

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Developing Thoughts

- Bragging rights?
  - Paper and Steel - Tonnage
  - The ‘Information Industry’?

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Developing Thoughts

- Bragging rights?
  - Paper and Steel - Tonnage
  - The ‘Information Industry’?
    - Data storage?
    - The size of the data pipes?
    - The number of racks in the server farm?

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Developing Thoughts

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  - What about SMART Infrastructure?

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  - What about SMART Infrastructure?
    - Number of devices?
    - Frequency of transmission?
    - Volume of data?

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Developing Thoughts

- What about SMART Infrastructure?
  - Number of devices?
  - Frequency of transmission?
  - Volume of data?
  - Oxford Road, Manchester
  - Others?

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Developing Thoughts

- What about SMART Infrastructure?
  - Number of devices?
  - Frequency of transmission?
  - Volume of data?
- Example?
- How about the VALUE of the INFORMATION?
  - What we can DO with it?
    - Improve capacity and utilisation
    - Improved reliability and uptime
    - Reduced operating and maintenance costs

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Developing Thoughts

- How about the VALUE of the INFORMATION?
  - What we can DO with it?
    - Improve capacity and utilisation
    - Improved reliability and uptime
    - Reduced operating and maintenance costs
- Data generates COST

Information generates VALUE

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The Data Proliferation Engine

- How has this come about?
  - Our ability to process data has increased exponentially
  - Data is multiplied, often hundreds of times
    - Email chains?
  - We put so much time into data processing we have no time left for turning it into information

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The Data Proliferation Engine

- How has this come about?
  - 1973 Texas Instruments Calculator
  - 1976 IBM3982 Golf Ball Terminal
  - 1980 Word processors
  - 1983 Personal Computers
  - 1990 Apple Power Book
  - 1995 Desktop Computing & Internet
  - 2000 PDA's & broadband
  - 2005/6 Smartphones and Blackberries
  - 2008/9 'I' EVERYTHING

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  - Our ability to process data has increased exponentially
  - Data is multiplied, often hundreds of times
    - Email chains?
  - We put so much time into data processing we have no time left for turning it into information
- Enablers?
  - Cheap, powerful devices
  - Cheap, fast, data transmission
  - Cheap, easy storage

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The Data Proliferation Engine

- How has this come about?
  - Reductions in cost, increases in speed!
  - It is, relatively, easy to explain and justify grey boxes and bellwire
    - And they can be admired, polished, depreciated and pictured in the annual report
    - And they can be fitted into a ‘rolling replacement’ cycle!

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  - It is, relatively, easy to explain and justify grey boxes and bellwire
    - And they can be admired, polished, depreciated and pictured in the annual report
    - And they can be fitted into a 'rolling replacement' cycle!
  - It is, relatively, hard to explain information!
    - it is, largely, invisible
    - It is difficult to 'count' (so we don't bother)
    - very hard to admire
    - it's 'value' is poorly understood and, after the first report, the audience always wants more
      - 'can you make it do…….?'
      - The 'customer' is always disappointed!

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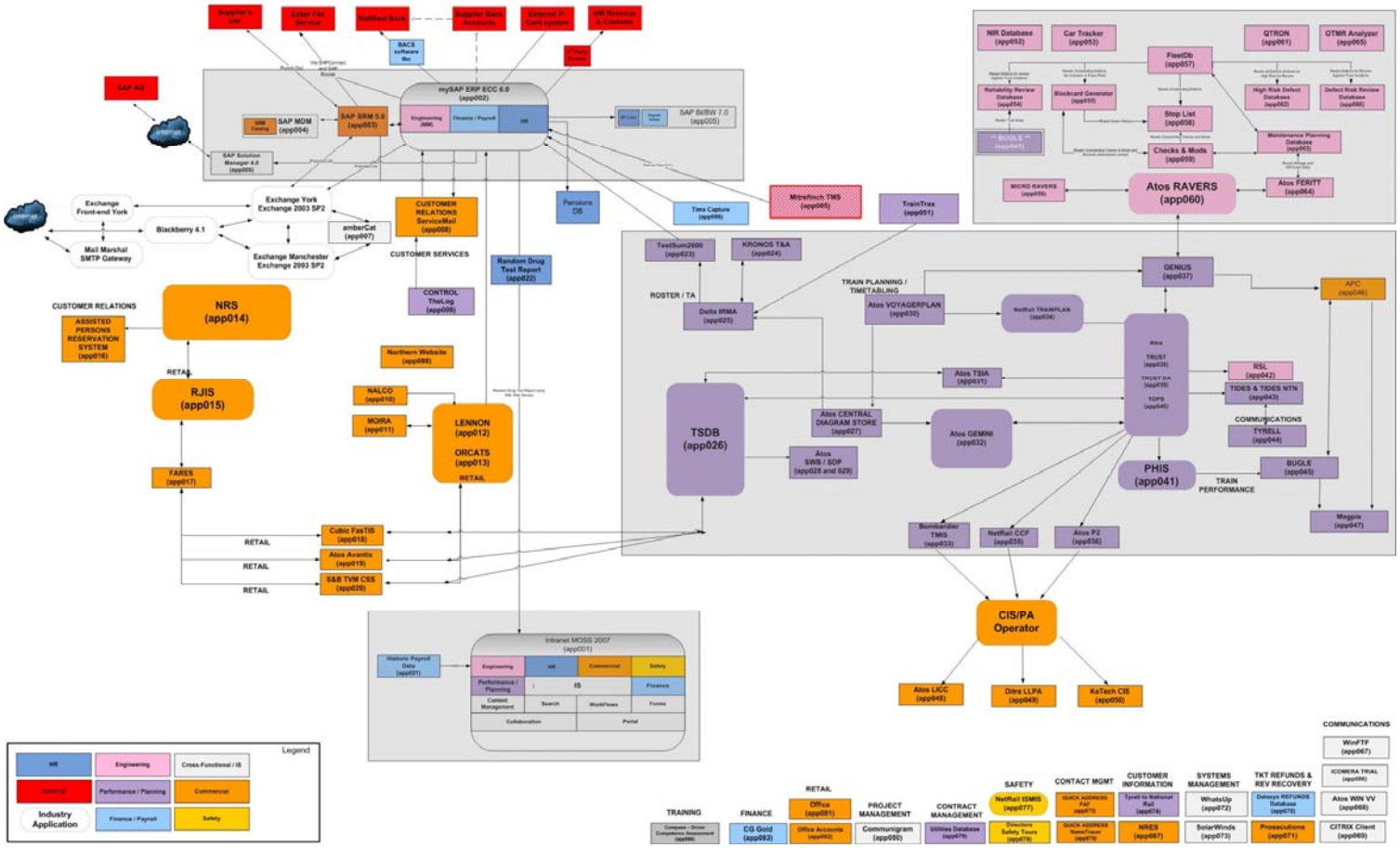
The Data Proliferation Engine



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The Data Proliferation Engine

150k excel spreadsheets

5000 access databases

103 business systems

507 locations

Direct 1 to 1s

352 managers

Department Meetings

5 regulators

Section Heads

9 functions

Individual Performance

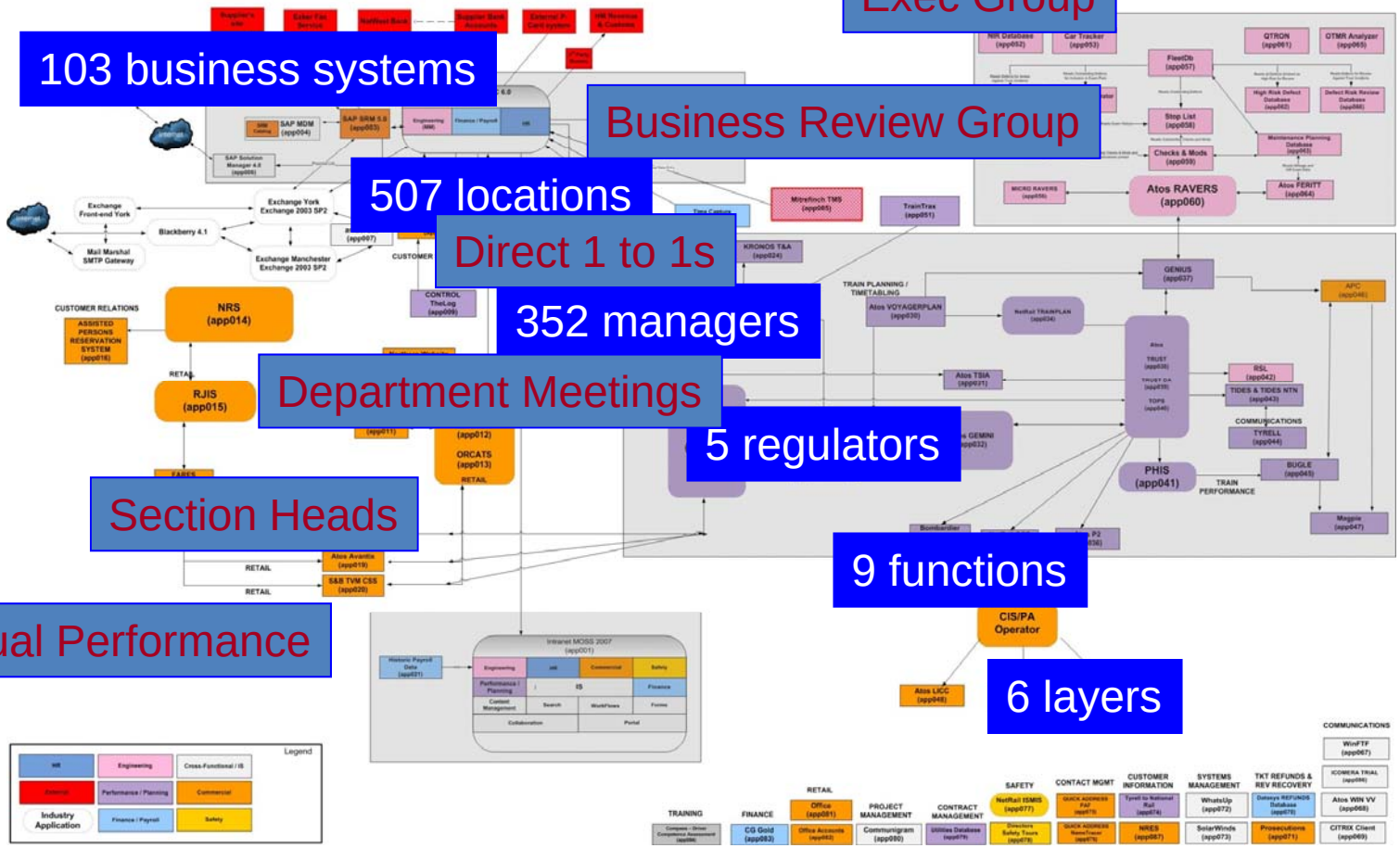
6 layers

Board Meeting

Exec Group

Business Review Group

Project Reviews



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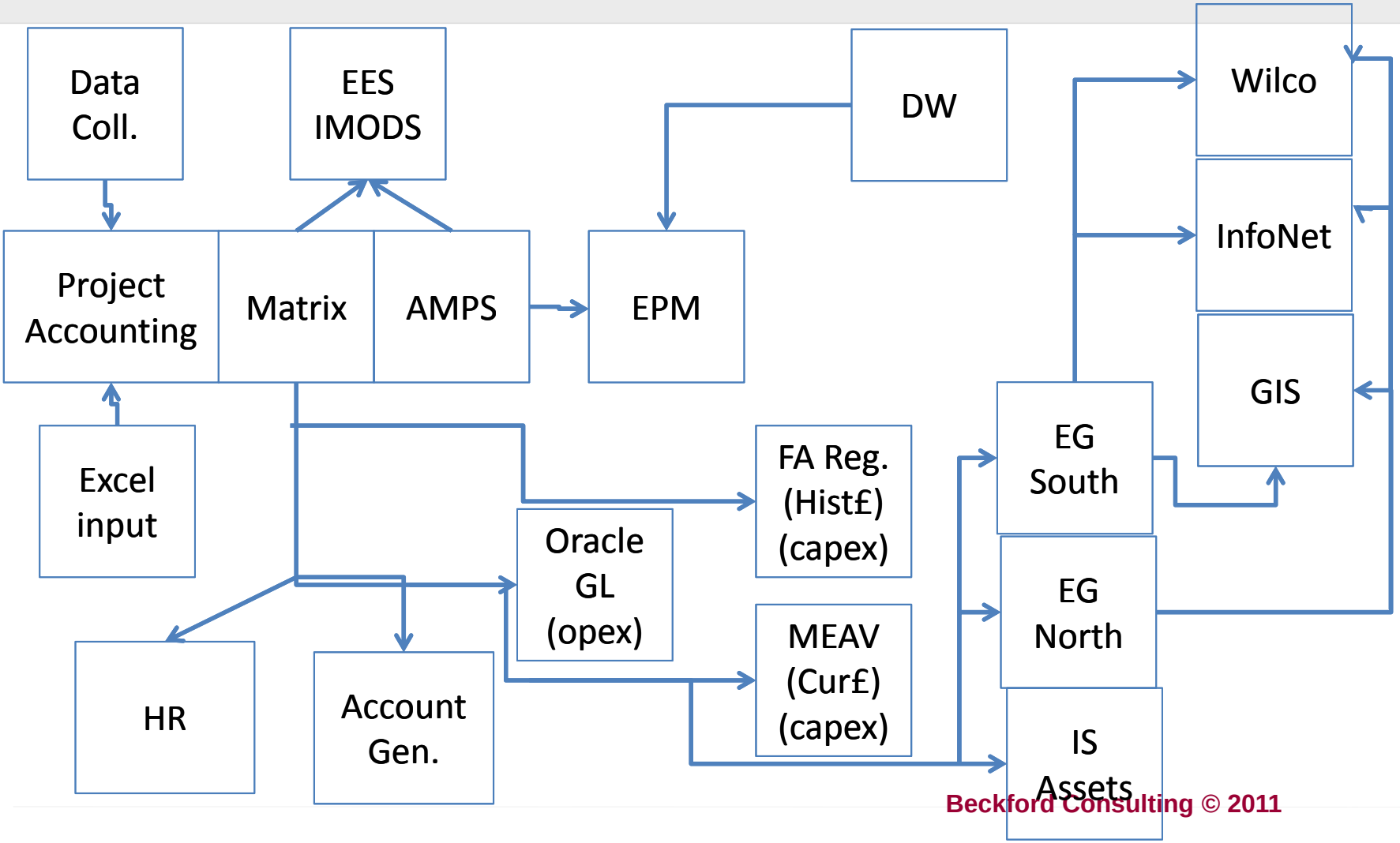

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Beckford's Law

- Moores Law
  - processing speed doubles every 2 years
  - a driver of the growth in cheap, fast machines
  - we get a lot more bang for our buck!

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Beckford's Law

- Beckford's Law
  - Data proliferates as a function of:

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Beckford's Law

- Beckford's Law
  - Data proliferates as a function of:
    - the number of users

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Beckford's Law

- Beckford's Law
  - Data proliferates as a function of:
    - the number of users
    - multiplied by the number of devices

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Beckford's Law

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  - Data proliferates as a function of:
    - the number of users
    - multiplied by the number of devices
    - multiplied by the number of applications

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Beckford's Law

- Beckford's Law
  - Data proliferates as a function of:
    - the number of users
    - multiplied by the number of devices
    - multiplied by the number of applications
    - multiplied by ease of transmission (the propagation rate)

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Beckford's Law

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  - Data proliferates as a function of:
    - the number of users
    - multiplied by the number of devices
    - multiplied by the number of applications
    - multiplied by ease of transmission (the propagation rate)
  - Information proliferation is the inverse function!

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- Data proliferation is therefore exponential in volume and frequency

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    - the number of users
    - multiplied by the number of devices
    - multiplied by the number of applications
    - multiplied by ease of transmission (the propagation rate)
  - Information proliferation is the inverse function!
- Data proliferation is therefore exponential in volume and frequency
- Information declines in proportion
- Upshot – the more data, the less information!

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Beckford's Law

- And, 'as evry fule kno' this:
  - Answers to the law of second law of thermodynamics
  - Reflects the notions of entropy (chaos) and negentropy (organisation):
    - Chaotic systems are higher energy/less organisation
    - Stable systems are lower energy/higher organisation
    - Data is free (unconstrained) energy – generating chaos
    - Information is constrained energy – generating order

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    - Data is free (unconstrained) energy– generating chaos
    - Information is constrained energy – generating order
  - Order is the basis of management
  - The key to consistency, coherence, performance

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Keep it Simple Stupid

- The NHS Electronic Health Record System
- The Child Support Agency
- CJIT (Criminal Justice IT System)
- Border Controls
- FiReControl
- Tax Credits
- ID Cards
- Defence Procurement
- Integrated Tax and Social Security (coming your way soon!)

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Keep it Simple Stupid

- "Every time Whitehall has made the case for technological innovation on the grounds of efficiency, it has ended up costing more not less"
  - *Daily Telegraph, 20th September 2011*

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Keep it Simple Stupid

- Information lets us make decisions
- For data to become information it must be presented
  - in context
  - in relation to other relevant data
  - in the right quantities
  - at the right time
  - in comparison to ‘model’ data (the desired outcome) which enables a decision to be made about change or improvement
- Decisions are not about having the right data – but about asking the right questions!

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So What?

- Establish NOT

  what questions we can answer given the data we have

BUT

  what questions we need to answer and what data is required to do so!

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Realising the Potential for Fusion21: Information Systems as the Enabler

John Beckford - Partner Beckford Consulting

Mark Chadwick - Head of Business Improvement, Fusion21

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Background

- A social enterprise
  - Owned by 7 Merseyside Housing Associations
  - Objective of Fusion21
    - Deliver Decent Homes at lower cost through intelligent procurement
    - Take a skills levy – invest in construction skills
    - Place trainees with contractors
    - Sustain the employment for minimum two years
  - Achievements:
    - Over 800 jobs created
    - £30m+ reinvested in local communities
    - £45m cashable efficiency savings
    - 20+ OJEU compliant frameworks

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Background

- Ambition
  - Triple turnover by 2015
  - Through
    - Organic Growth
    - Joint Ventures
    - Alliances
  - But fundamentally
    - Operational Excellence
      - People
      - Processes
      - Information

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Background

- Getting involved
  - 6 years old, £3m t/o, 22 FTEs
  - Business growing steadily
  - ‘Adolescent’
  - IS fully outsourced
- Initial engagement
  - Information Strategy
- Subsequently
  - Business Improvement
  - Training & Development
  - Business Strategy
- Now – 9 years old, £4.5m t/o, 25 FTEs

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BECKFORD CONSULTING Approach

- A three moving body problem cannot be solved – but that is the job!
  - Process Improvement
  - Information System Development
  - Behavioural Change
- Adoption of managerial cybernetics as the underpinning thinking
  - The Viable System Model, Stafford Beer
    - www.beckfordconsulting.com

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The Projects

- Board Engagement
- IS Insourcing
- Organisation redesign
- Resource bargaining
- Learning & Development Programme
- Quality Improvement (ISO9001)
- Information Systems Redesign (Process Management)
- Performance Management System (in course)

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The Projects

- IS Insourcing
  - Improved performance management
    - Accurate information collected and used to manage performance
    - Potential for real time performance information
    - Potential to improve KPI information for
      - Board
      - SMT & managers
      - CORE
      - KAM
      - Other stakeholder groups
    - Sustainably reduced IS operating cost base

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The Projects

- Quality Improvement (ISO9001)
  - Cornerstone of operational excellence
    - "Doing it right AND doing it well" (Fusion21 CEO, 2011)
  - Before ISO
    - Individual Process
    - Failure to adhere to standards
    - Customer Expectations not always managed
  - After ISO
    - Coherent Processes
    - Substantially Improved Compliance
    - "Through ISO9001 …. The level of control ensures effective delivery", *Dr. Bill Moore, ISO Consultant*

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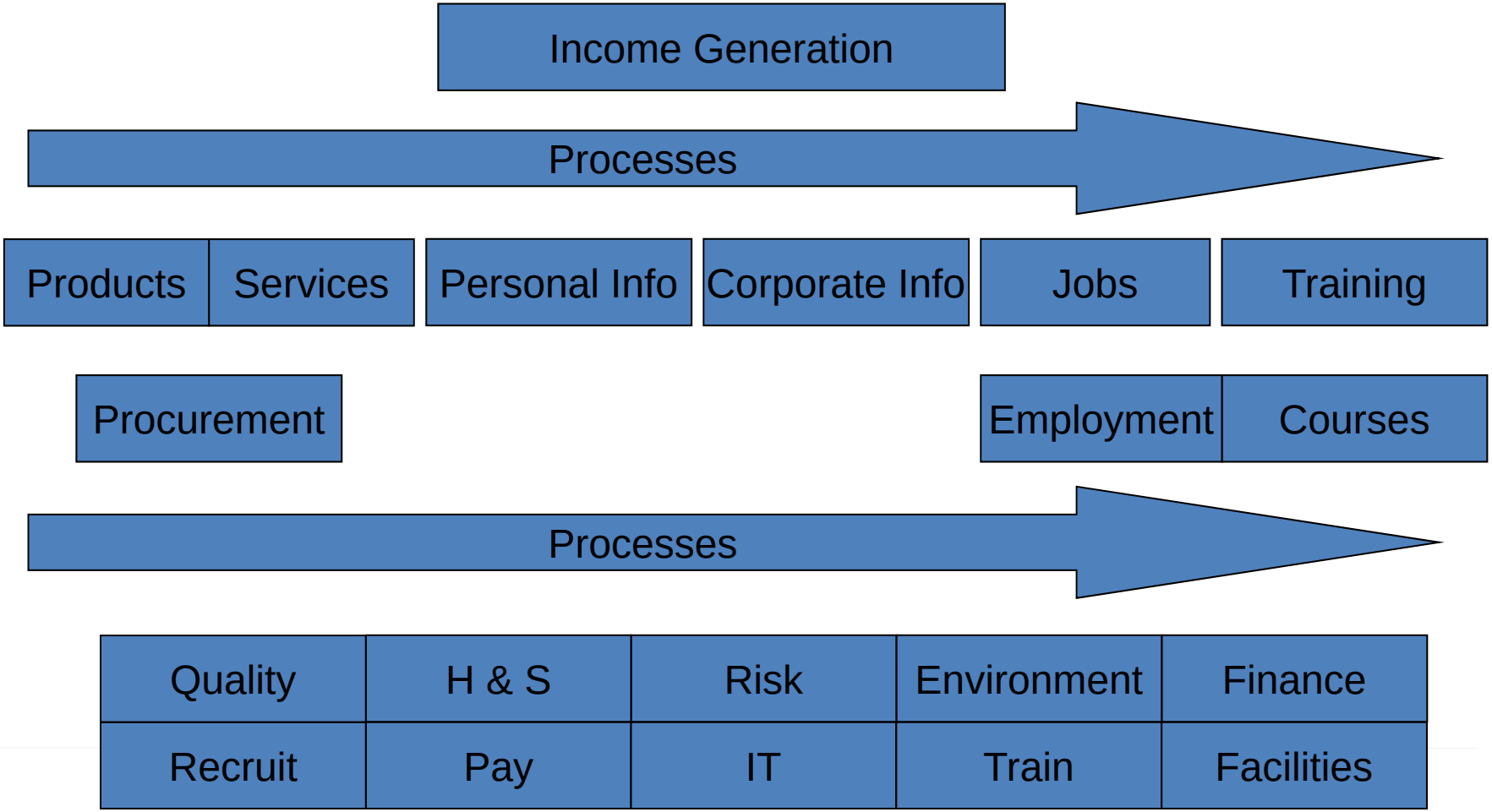
The Projects

- Information Systems Redesign (Process Management)



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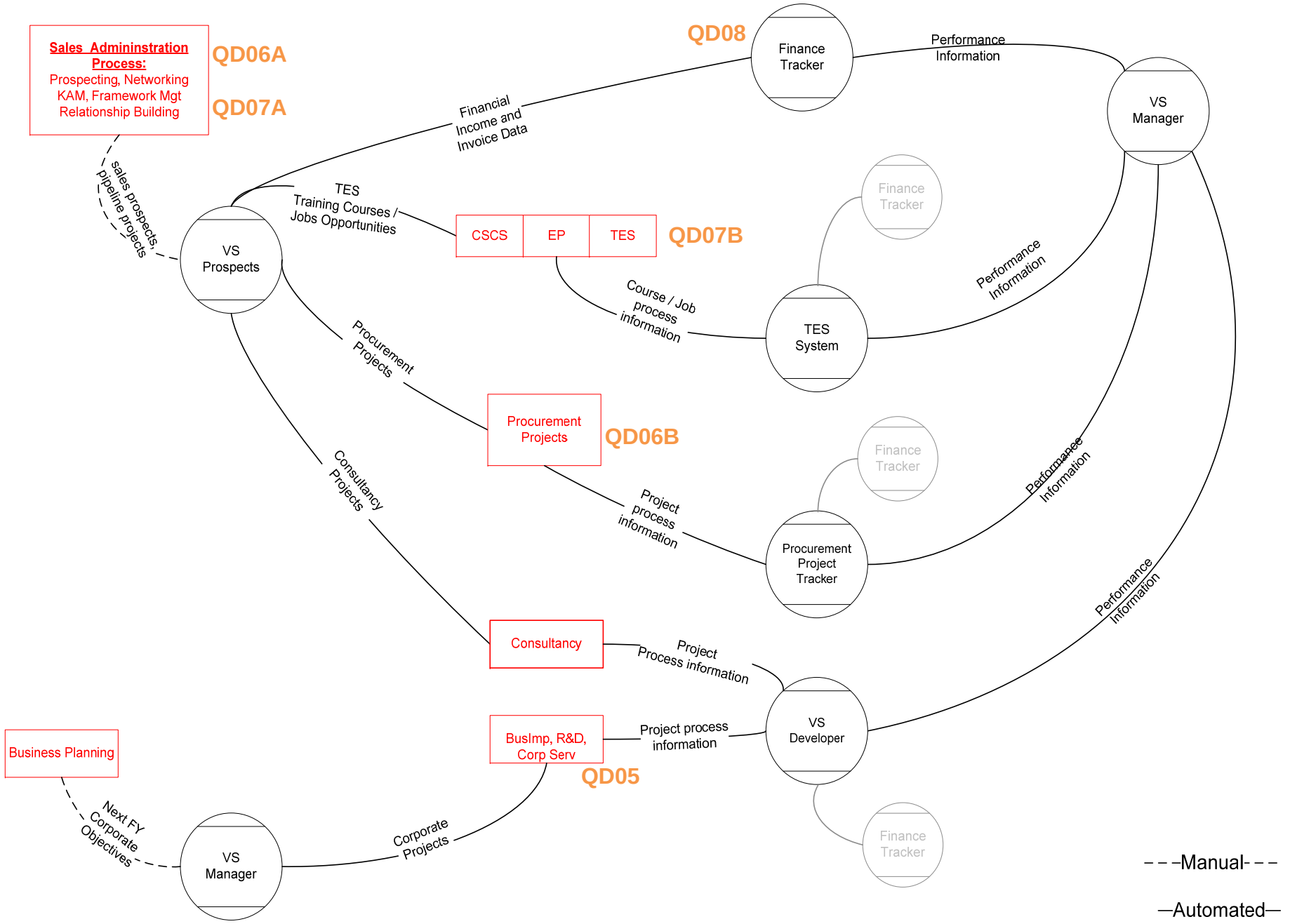

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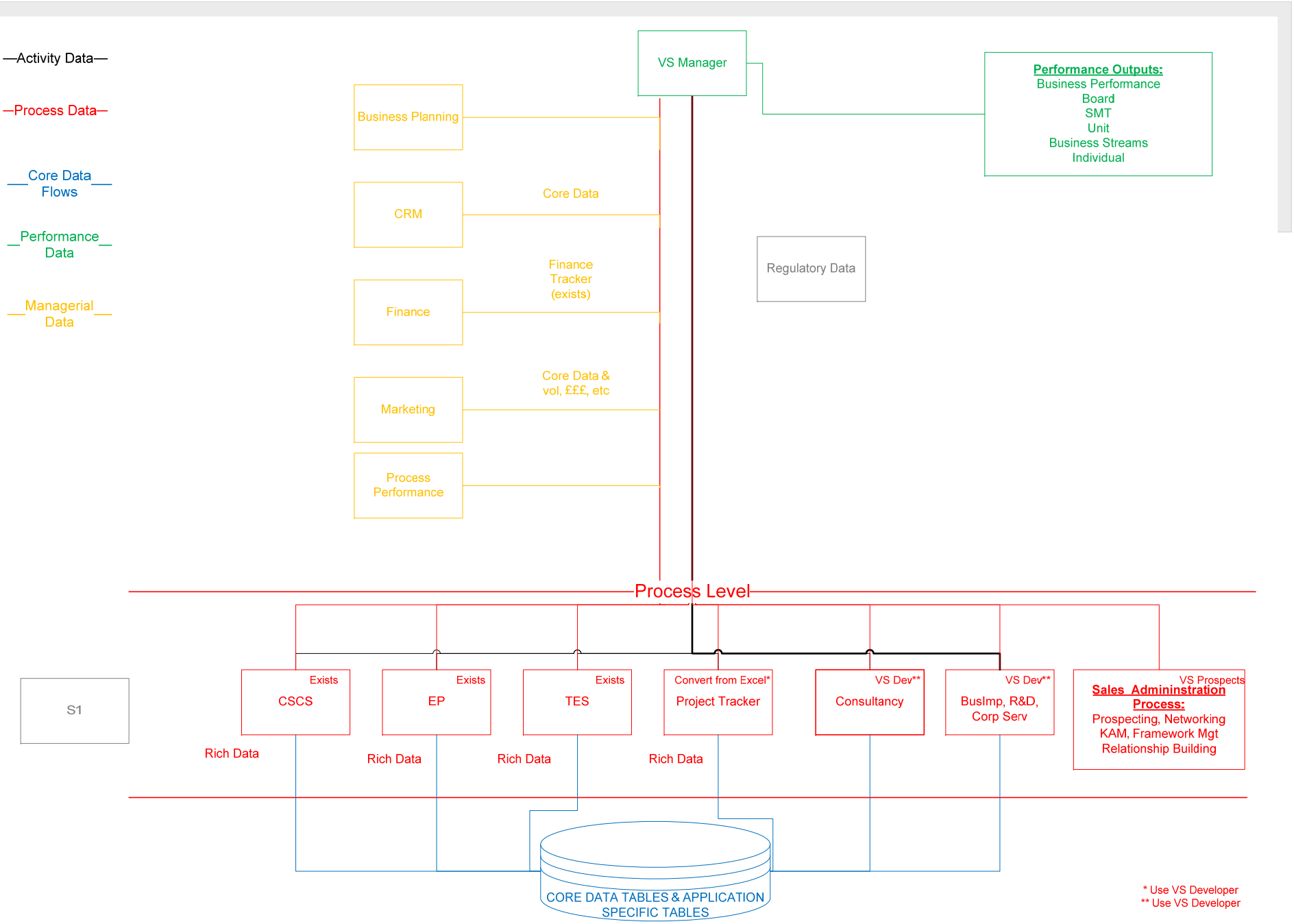

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What has gone less well

- Adoption of change
  - Some projects at a quicker rate than others
  - Countered through positive reinforcement of benefits and additional support
- Resistance to change
  - Always a difficult barrier to overcome
  - Countered through continual engagement with stakeholders throughout change initiatives

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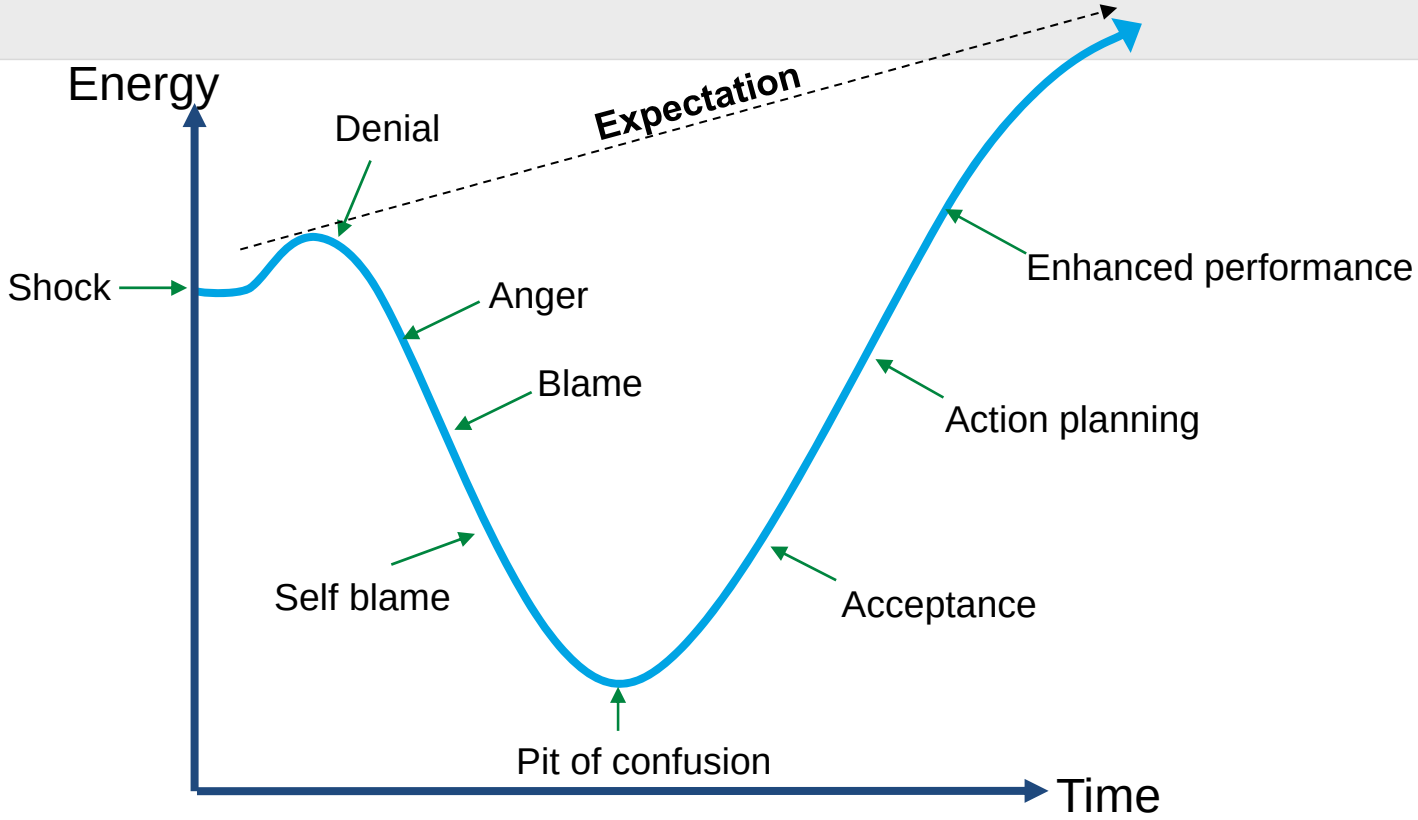

Source: Derived from E Kubler-Ross, *On Death and Dying*

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Business Impact

- Results:
  - over £500,000 in net cumulative efficiency savings,
  - increased growth capacity
    - Turnover up 33%
    - Staff increase 15%
  - ISO 9001:2008 Accreditation
  - Improved Performance Reporting
  - Improved leadership capability
  - In sourced IT infrastructure
  - Information System Developments

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Value for Information Systems

- A utility
  - 200 applications (and rising!)
  - Capital spend on IS £10m+ annually!
  - IS Operational Expenditure £12m+ annually
  - Annual value of information provided?

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Value for Information Systems

- A utility
  - 200 applications (and rising!)
  - Capital spend on IS £10m+ annually!
  - IS Operational Expenditure £12m+ annually
  - Annual value of information provided?
- Unknown
  - No one held to account for it
  - Basis of investment? Best endeavours!
  - AND
    - they don't have the right information to make good decisions!

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Value for Information Systems

- A small manufacturer
  - £24m t/o
  - 150 employees
  - low volume batching, high complexity product range
  - only use
    - on plant SCADA systems (not connected or integrated)
    - manufacturing planning system
    - accounts system
  - BUT business out of control
  - WHY? The data genie has escaped from the bottle!
    - uncontrolled, duplicated and triplicated, lacking integrity

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Value for Information Systems

- As matters stand today, many organisations are like this:
  - they don't know why they are buying what they buy
  - they don't know why they are using what they use
  - they really don't know what it costs (to buy or run)
  - they really don't know the value it provides

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Value for Information Systems

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  - they don't know why they are buying what they buy
  - they don't know why they are using what they use
  - they really don't know what it costs (to buy or run)
  - they really don't know the value it provides
- AND:
  - money is more easily spent on boxes and bellwire than on information
  - they spend on the 'S' when they SHOULD be investing in the 'I'!

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Understanding Information

- Information lets us make decisions
- For data to become information it must be presented
  - in context
  - in relation to other relevant data
  - in comparison to ‘model’ data (the desired outcome) which enables a decision to be made about change or improvement
    - not improvement in the data but in the activity that generates the data

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- CEO: “I want better results”

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    - not improvement in the data but in the activity that generates the data
- CEO: “I want better results”
- Information delivers:
  - the right value
  - at the right time
  - in the right format and language
  - the right decision

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Understanding Information

- Effective investment in IS requires a value proposition that:
  - offers realisable information benefit
- as an enabler of
  - realisable business benefit
- and
  - “sweats the asset”
- This requires:
  - a deep understanding of information needs
    - now and tomorrow
  - intelligent exploitation of existing systems

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Understanding Information

- Effective investment in IS can, in many cases, be derived from effective exploitation of existing systems:
    - the ‘data’ is already there
    - we are just not asking the right questions

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Understanding Information

- Effective investment in IS can, in many cases, be derived from effective exploitation of existing systems:
  - the ‘data’ is already there
  - we are just not asking the right questions
- Contention:
  - there is significant benefit to be obtained by many organisations from existing systems
  - there is more value in realising that benefit than from investing in new systems (and more data!)
  - the IS department won’t like it!

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Understanding Information

- So what SHOULD we do?
  - Develop an Information Strategy rooted in:
    - Understanding the information needs of the business
    - Understanding the value to be obtained from it
    - Commission Information Projects
    - 'Sweat the asset' – work the IS as hard as we work other capital assets (most computers do only a small fraction of the work of which they are capable)
    - When the pips are squeaking….
    - Invest against 'Return on Information Investment'
      - Measure the information benefit against the cost of provision

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So, what SHOULD we do?

Understand the information needed to manage the business

Business Effectiveness

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So, what SHOULD we do?

Understand the information needed to manage the business Business Effectiveness	Understand the value to the business of having that information Business Financial Performance

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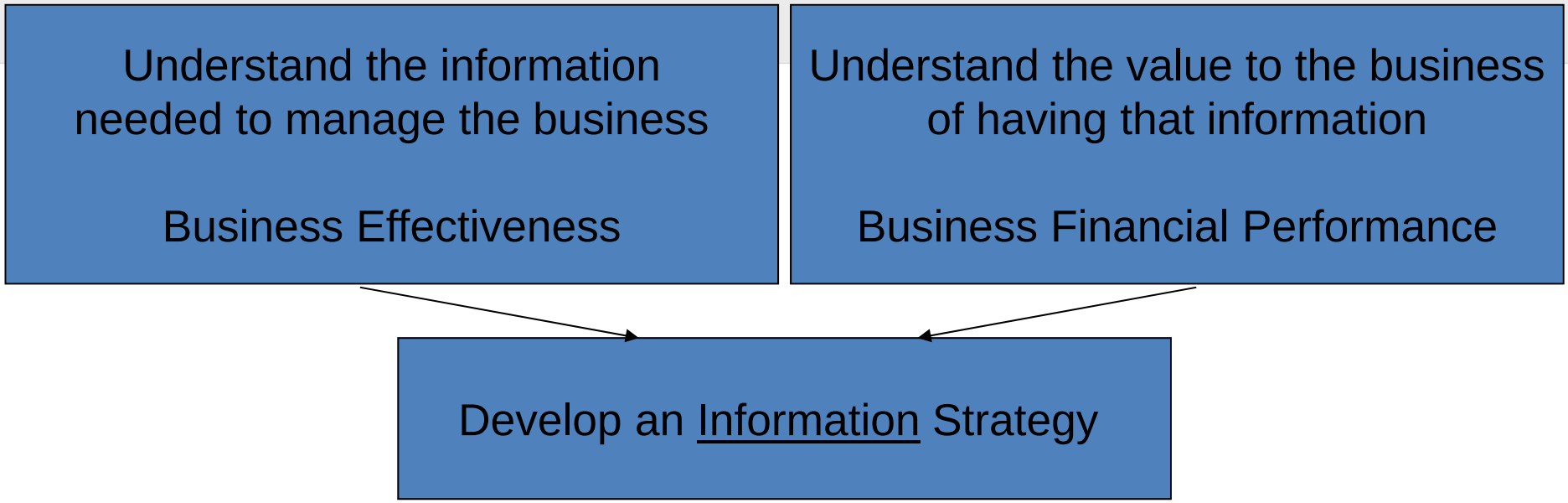
So, what SHOULD we do?



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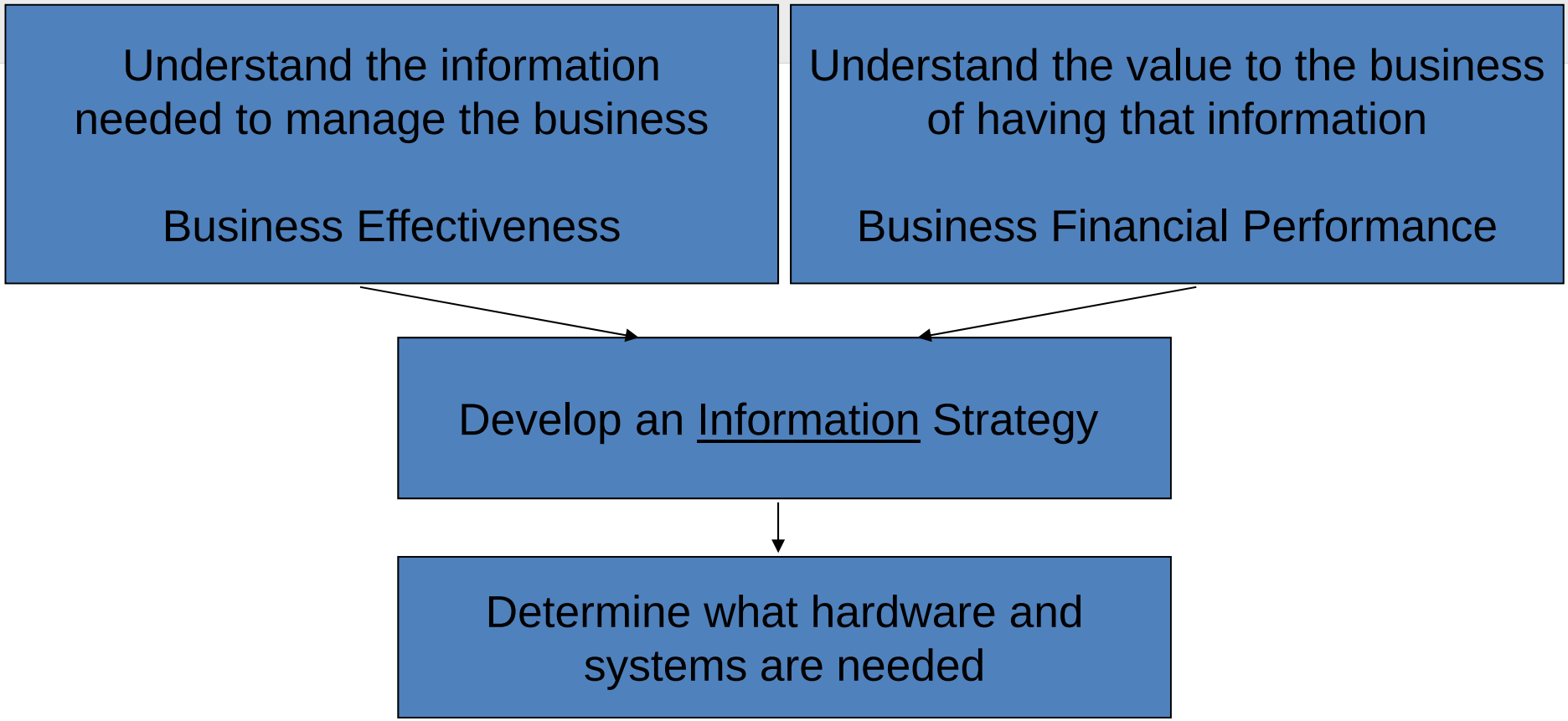
So, what SHOULD we do?



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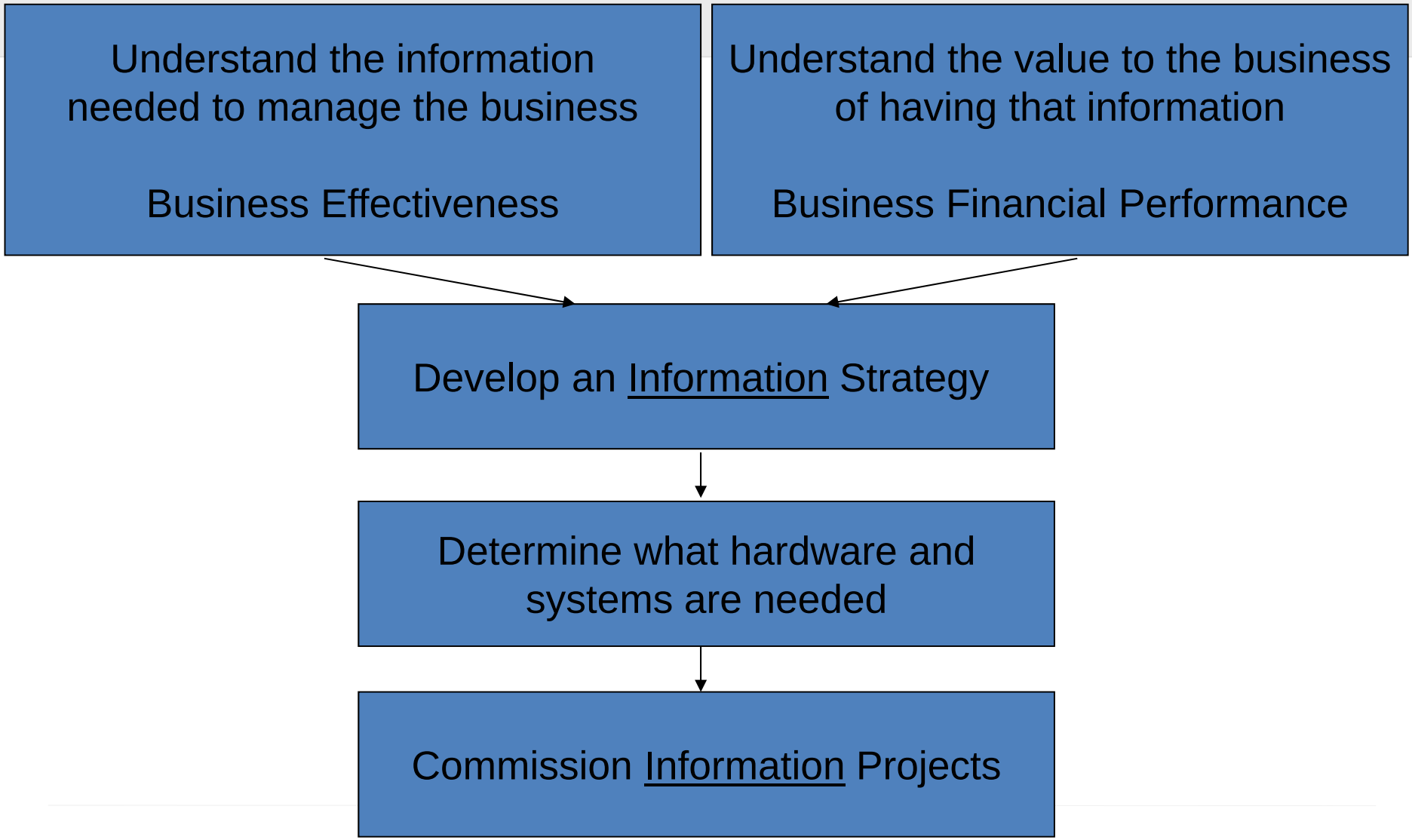

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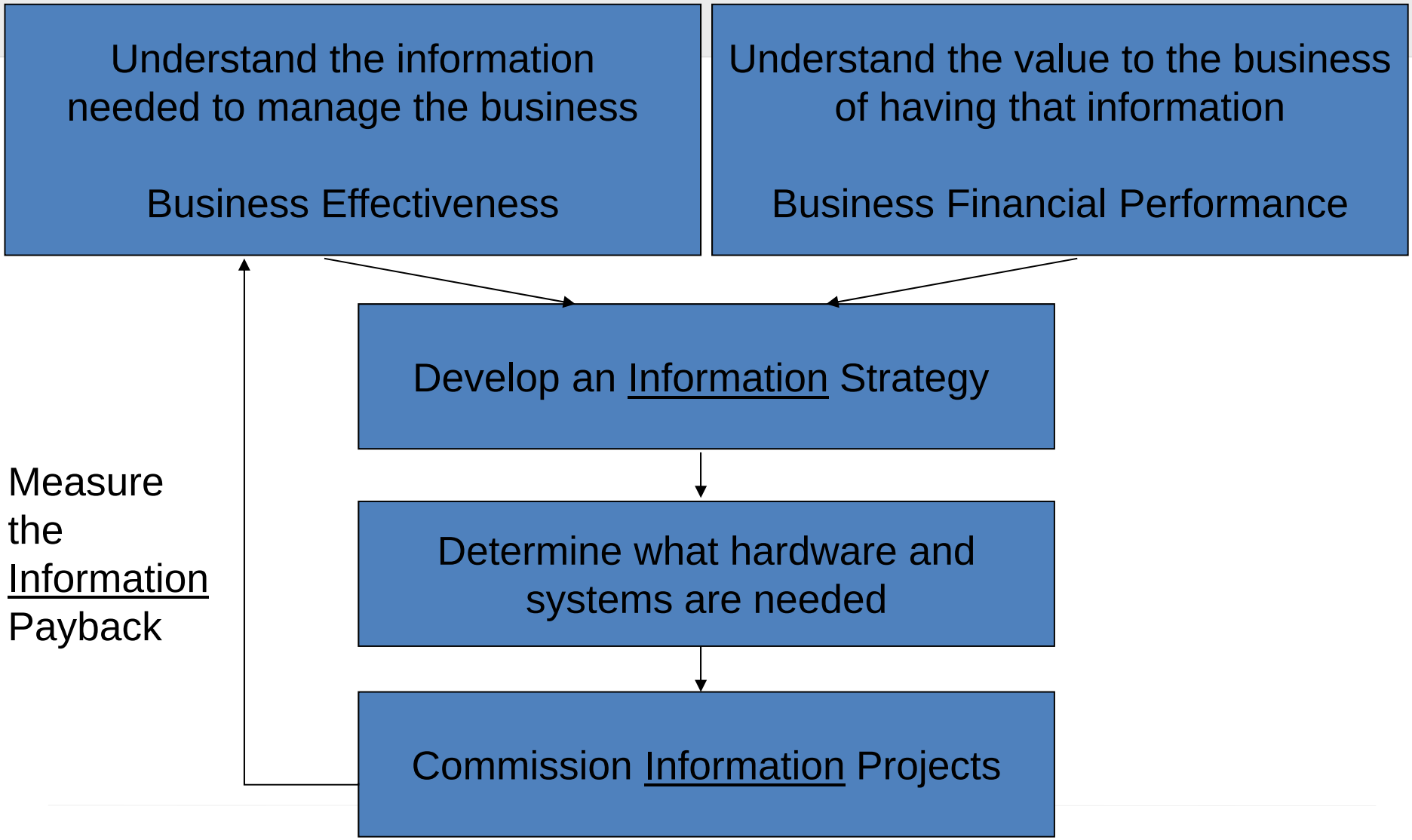

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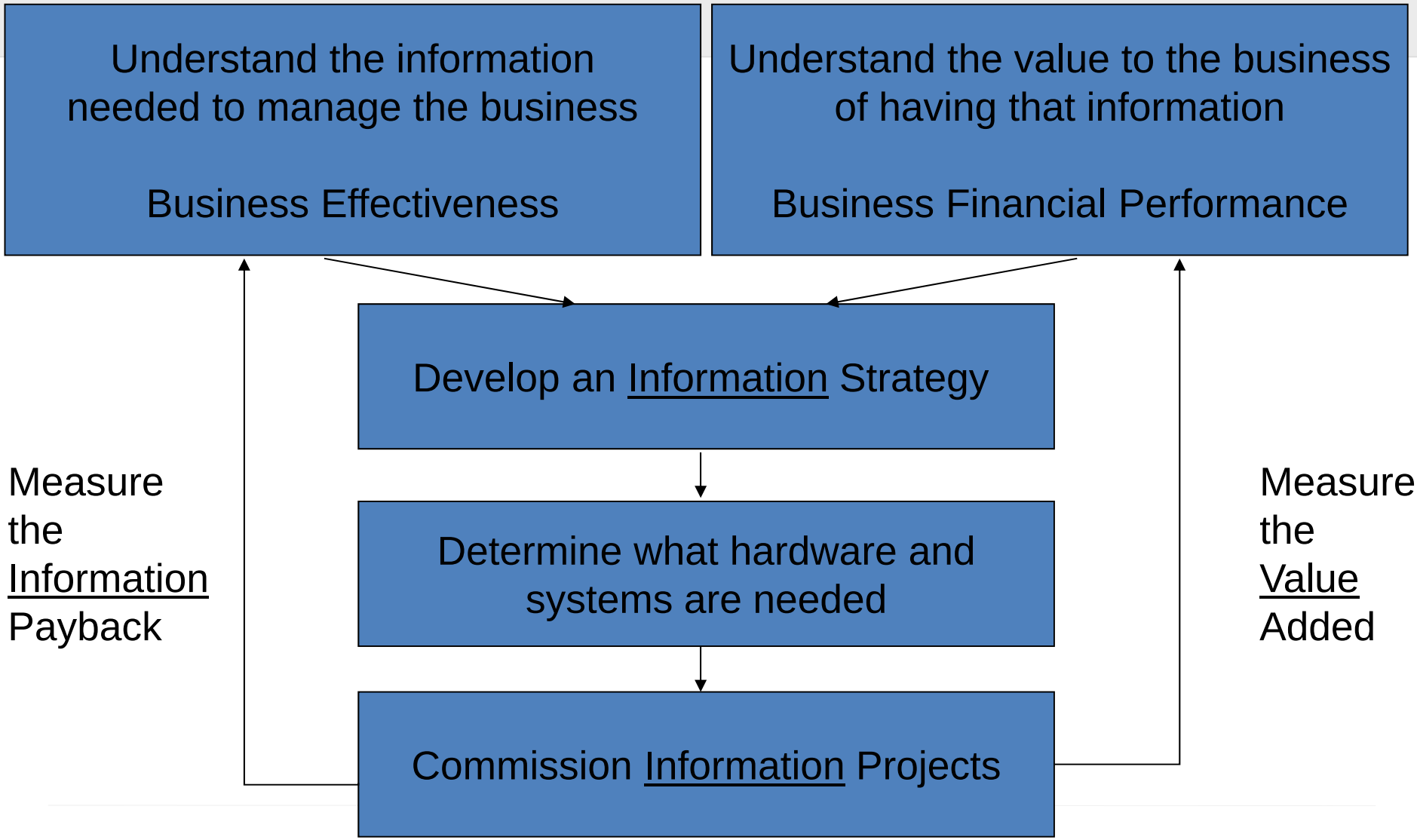

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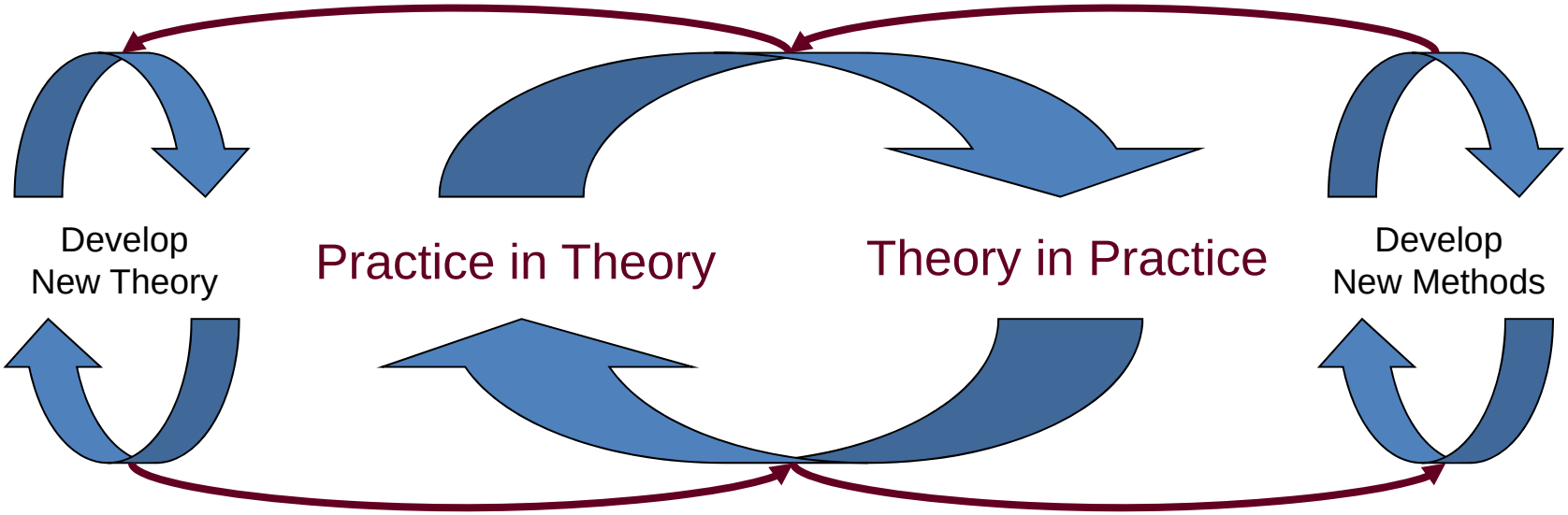
How do we do that?

Continuous adaptation!



Cycle of Reflection

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Payback: Information Projects

- Instead of measuring the COST of information provision, measure the VALUE of information provided

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Payback: Information Projects

- Instead of measuring the COST of information provision, measure the VALUE of information provided

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Payback: Information Projects

- Instead of measuring the COST of information provision, measure the VALUE of information provided
- How can that be expressed:
  - Improved response times to customers improve Customer Service
  - New opportunities recognised and responded to more effectively
  - Staff make better decisions
    - Spend LESS time collating data, more time analysing and using information
    - More ‘informed’ decisions, made more quickly
  - Reduce time to market
  - Adverse external events responded to more rapidly reducing losses
  - Positive external events are responded to more rapidly increasing revenues
- Value expressed in terms of the drivers of YOUR business

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Payback: Information Projects

- And yes:
  - Total numbers employed can fall
  - The systems can be easier to use
  - There can be less duplication
  - Systems can be more up to date and more reliable

- ALL the conventional benefits can be realised as well!

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The Value of Information?

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The Value of Information?

- What IS the Value of 'I'?
  - The ability to achieve sustainable improvement in
    - CUSTOMER SERVICE
    - COMPETITIVE EDGE
    - COSTS
    - REVENUE

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The Value of Information?

- What IS the Value of 'I'?
  - The ability to achieve sustainable improvement in
    - CUSTOMER SERVICE
    - COMPETITIVE EDGE
    - COSTS
    - REVENUE
- What do I need to know?
  - Information Value
    - What is a happy customer worth?
    - What is the value of time in the market?
    - What is the cost of a failure or error?
    - How many more might I produce and sell?

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The Value of Information?

- How do I calculate Information Value
  - What is a happy customer worth?
    - Unit net value * number of repeat customers * number of purchase cycles
  - What is the value of time in the market?
    - Unit net value * volume per day * number of days advantage over competitors
  - What is the cost of a failure or error?
    - Cost per occurrence * frequency * days delay in the receipt of the information * days required to design and implement a solution
  - How much more might I produce and sell?
    - Current capacity less Current volume * unit net value * number of days capacity not utilised
- Examples
  - Happy Customers, Logistics, Projects, Processes

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Example 1: Happy Customers

- A registered social landlord was seeking to improve cost-effectiveness of operation
- Customer service costs were rising, income restricted by regulation
- A step change was needed in cost of service delivery to close the gap
- It was recognised that the principal activity of the organisation was data processing and THAT was mainly carried out by people
- A system – 'The Data Hut' was devised to automate the delivery and management of service activities
- The system, built as an integration layer to existing data systems, enabled BOTH a sustainable reduction in headcount (around 100 people) AND a sustainable improvement in service delivery
- Costs £400k, deliverable benefit year one £1m
- The Information Value: £600k per annum and rising

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Example 2: Logistics

- A well known parcel distribution business was struggling to balance activity volume and staffing levels
- There was significant variance and unpredictability in daily volumes
- Its Information System led to substantial reporting delays
- Custom and practice informed all management decisions
- A daily reporting tool was constructed which:
  - analysed data in near real time
  - reported performance by individual, line, unit, shift
  - calculated the net value of change in staffing levels
- The information generated savings in staff cost of £15000 per day
  - The ANNUAL saving was £4.68m
  - The cost of the information provision was £120k
- The information value (so far!)
  - £4.68m * 6 (years) - £120k = £29m

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Example 3: Projects

- A research organisation was seeking to optimise project life cycle to reduce time to market for new therapeutics
- The typical life cycle is 19 years from project inception to generic competition - entry to the market is typically at year 7
- The global market for each new therapeutic is £ billions
- A project simulation tool was devised:
  - simple modification of project plans in real time
  - assumptions, dependencies, resource allocations, activity durations
- The time to produce a revised plan was reduced from one month to one hour
- Project deliverables were recognised as deliverable up to one year earlier
- The Value of Information:
  - 12 months additional sales before generic competition
  - For EVERY project!

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Example 4: Processes

- A manufacturer was fighting in a tough business to increase output volume
- Every extra ton of output was worth £350 in the market
- Daily output was erratic and unpredictable
- The annual budget (300,000 tons) was consistently missed
- A production simulator was built which analysed the capacity of the whole plant and identified potential volumes for each element of the plant
- The capacities were discussed with the Production Team
- A plan was devised to systematically improve output and use the simulator to monitor volume
- Within 12 months the plant was producing in excess of 400,000 tons
- The Information Value:
  - 100,000 tons * £350 * 3 (years) = £105m additional revenue

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ANL Example

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Obstacles to transparency

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Obstacles to transparency

- Difficulty
  - Non-financial value can be difficult to measure!
- Ignorance
  - Lack of method, lack of skill, lack of data
- Assumptions
  - Unquestioned ways of working, unchallenged costs
- Politics (the CEO's favourite project!)
    - There will ALWAYS be one of these
    - Managing bad news
- Lack of breadth of understanding
    - There is ALMOST no such thing as an IT project
    - There are many INFORMATION projects
    - The costs are in the hardware, software, consultancy
    - The benefits are in the Information – but we don't measure that!

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What might be done differently?

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What might be done differently?

- Understand that:
  - NO project has an automatic right to exist!
  - SOME projects have no visible payback
- Develop a Project Planning/Business Case approach that:
  - is rigorous and transparent
  - addresses ‘hard’ issues
    - visible costs and benefits
  - exposes hidden costs and benefits
    - steering & stakeholder costs
    - behavioural benefits, learning
    - time to market, reduced errors, increased volumes
  - identifies ‘political’ aspects of the project
- Be brave!

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Measuring RoI for Project Management

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Measuring RoI for Project Management

- The financial measures remain the same:
  - £ Cost/ £ Benefit * 100/1 = %RoI!
  - That's not going to change – it's how the sums work!
- What is different?
  - The costs and benefits address the wider business implications
  - Non-financial benefits and costs are understood
  - The basis of measurement is shifted from 'pure' financial measures to a range of quantitative AND qualitative measures
  - There is greater understanding and appreciation of the project itself – and the consequence of THAT is greater commitment!

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Information for Decision

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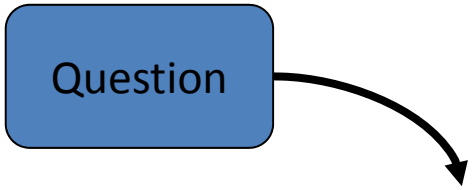
Learning?

- A Learning Cycle:



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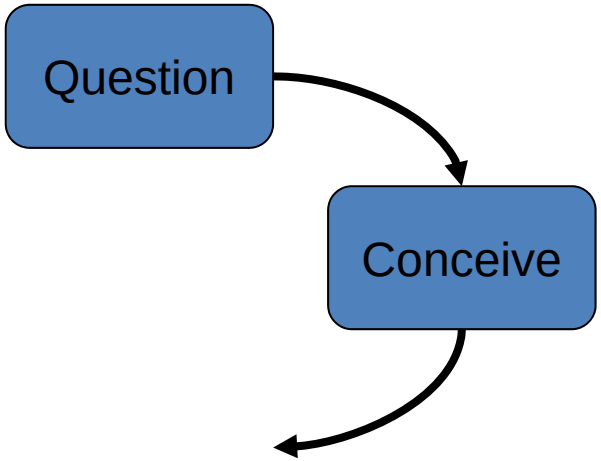

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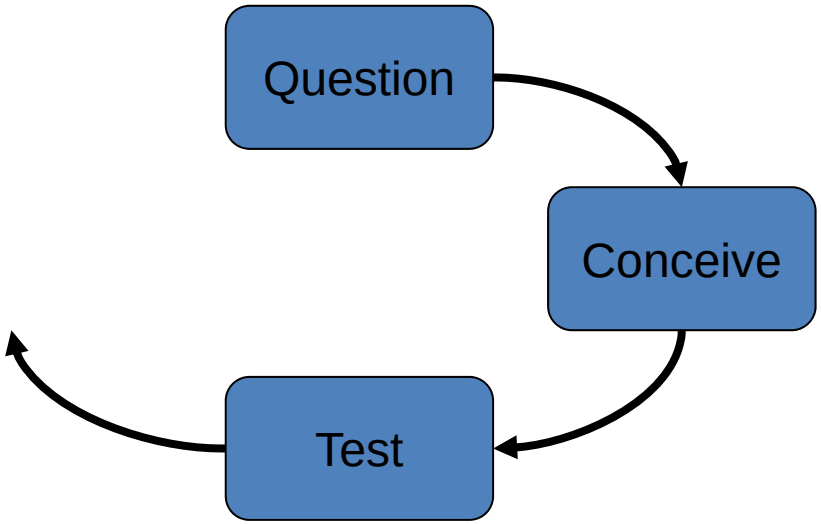

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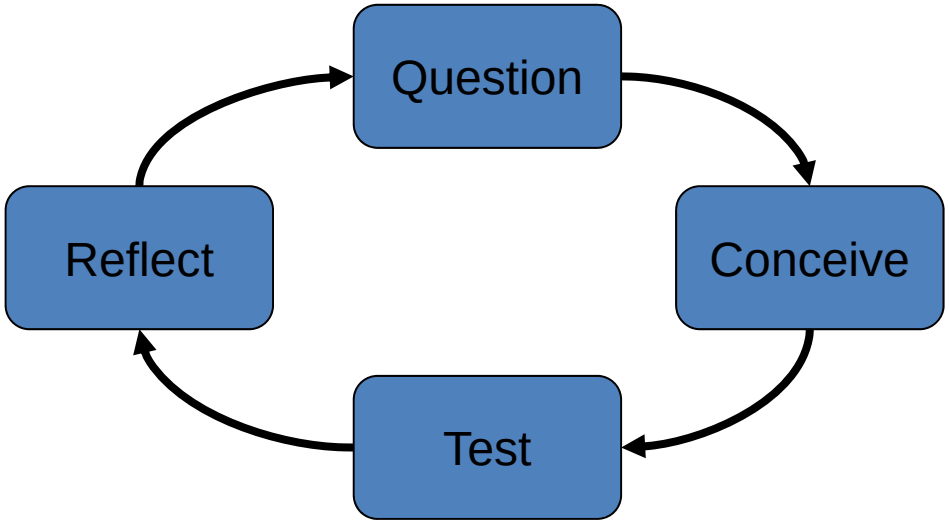

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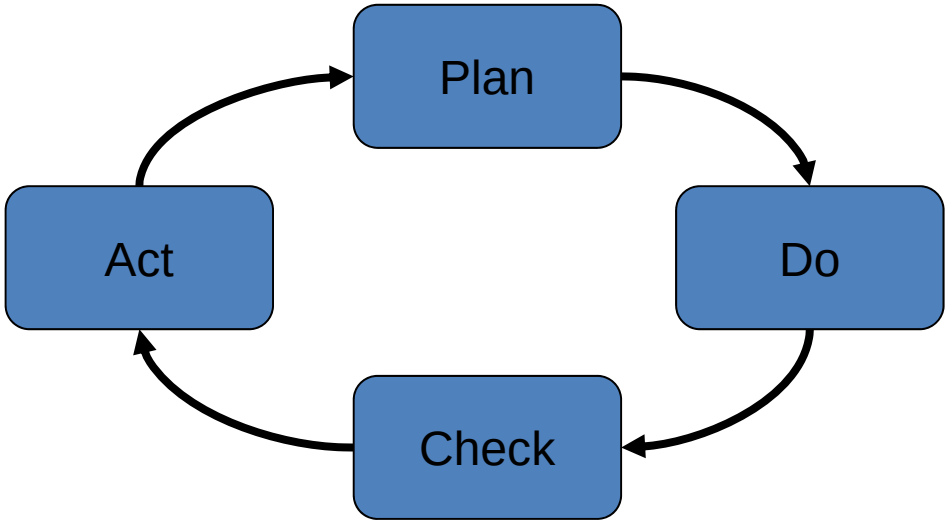

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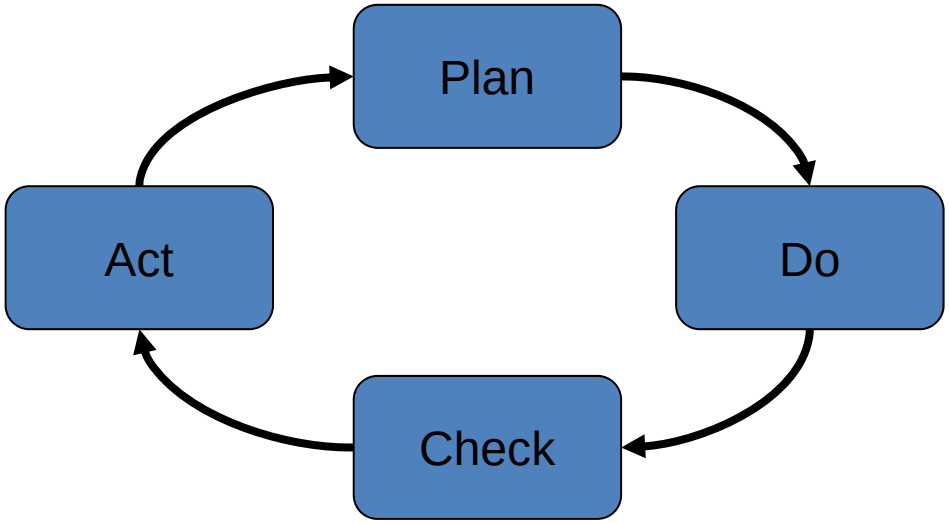

What has changed?

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Learning?

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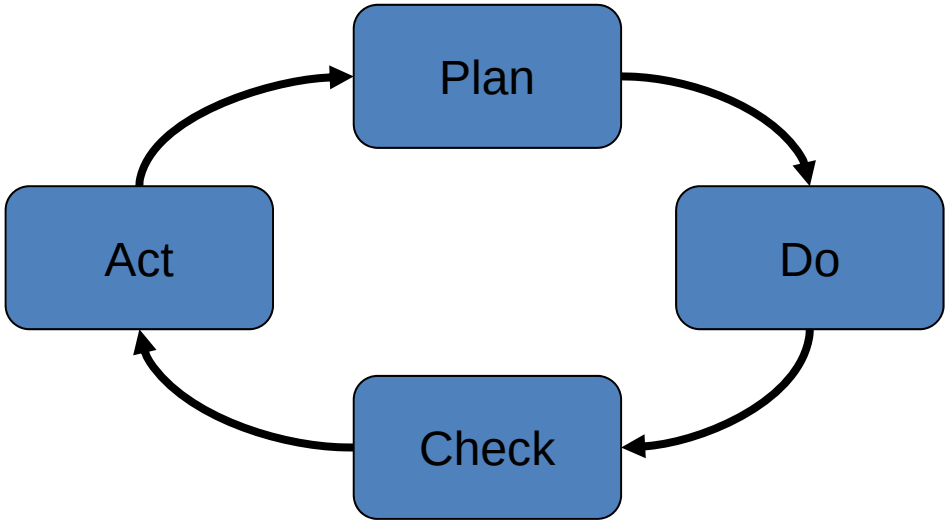

- What has changed is knowledge!

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Learning?

- What has changed is knowledge!
- New knowledge enables new decisions

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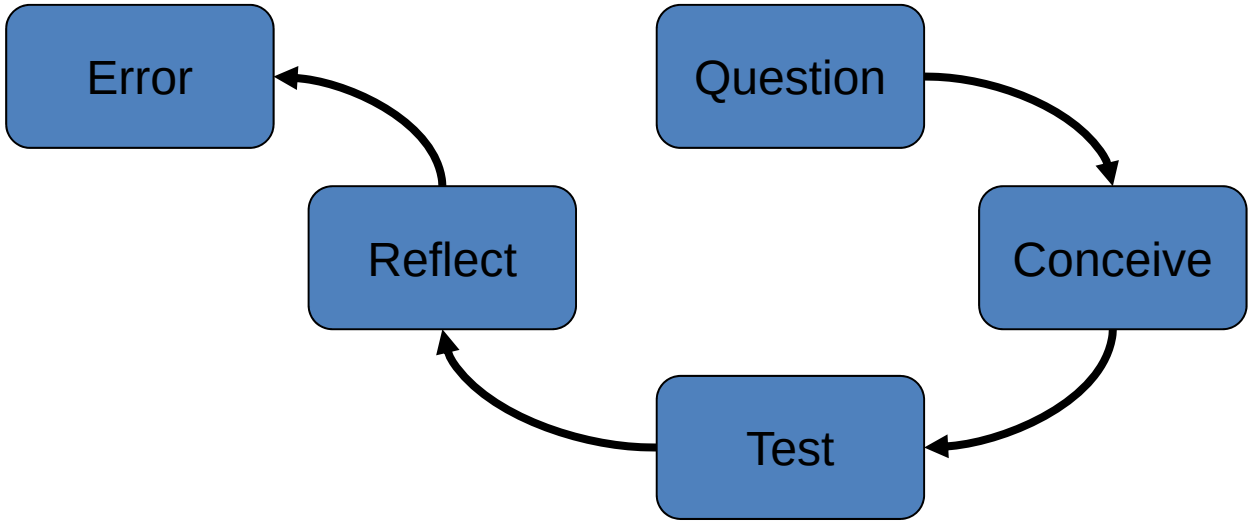
Learning?

- Learning fails when “Information Loops” are left open



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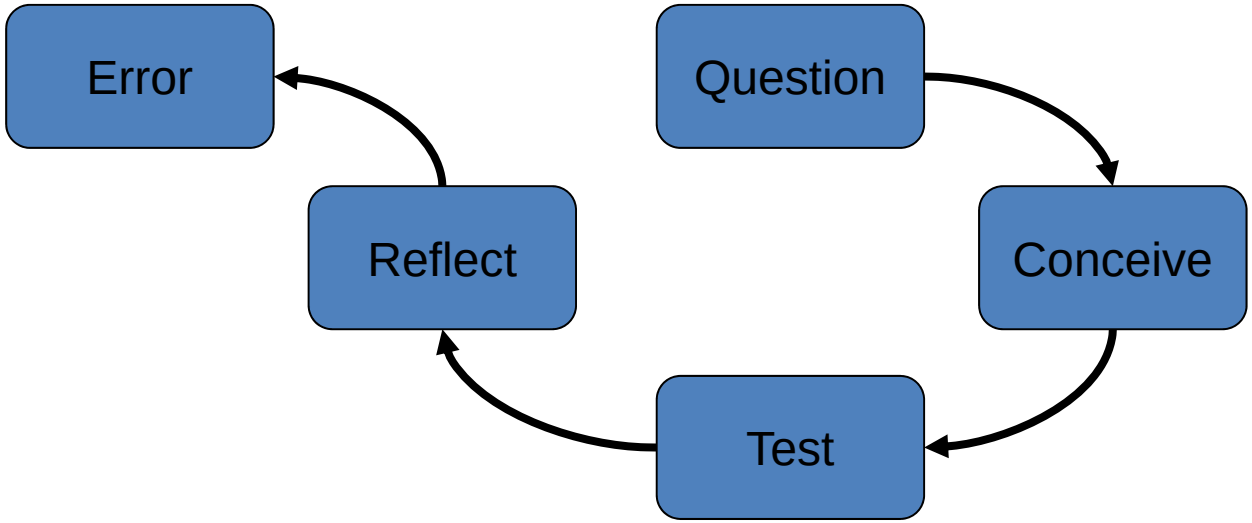
Learning?

- Open loops (lack of closure) mean that nothing is decided – so nothing changes!



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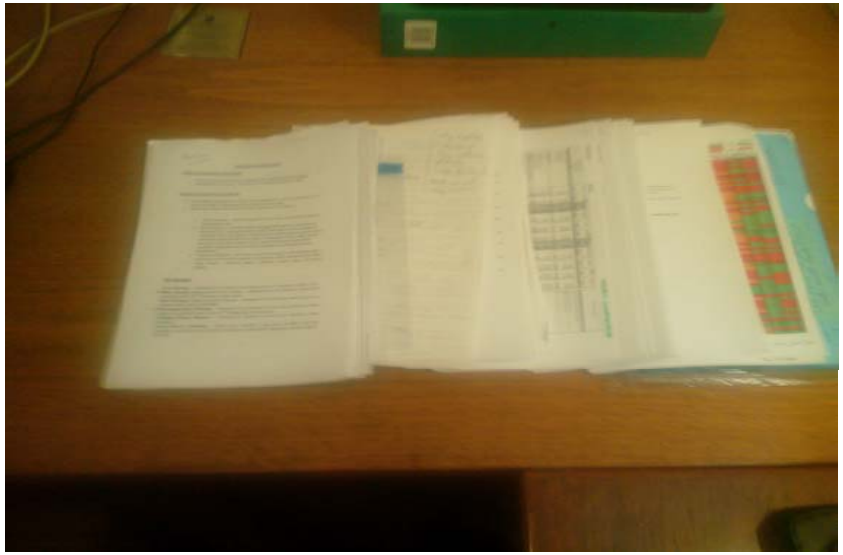
Gathering and validating data

- So, how do we carry out this ‘exchange of data’?
- Typically by producing a report (or several!)



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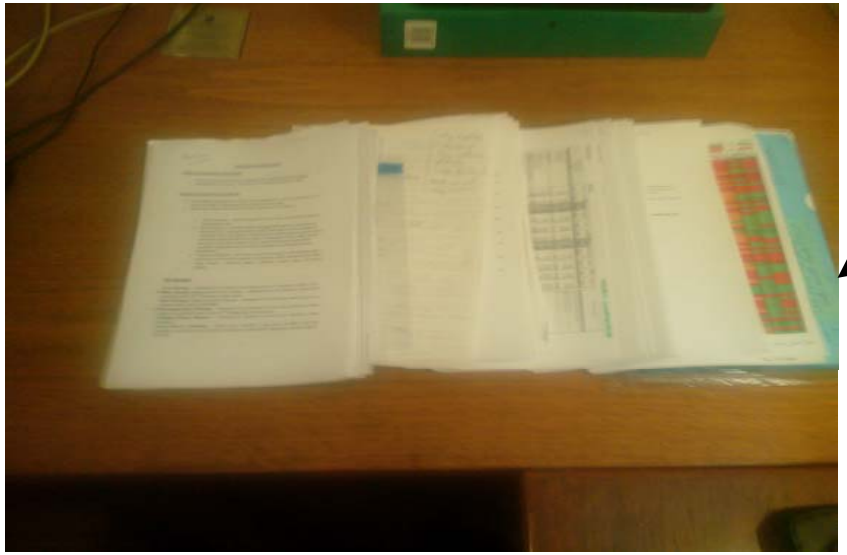

One week’s worth for one Director

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Gathering and validating data

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The Month!

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Gathering and validating data

- So, how do we carry out this ‘exchange of data’?
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- Typically we are overwhelmed with data – but have little information!

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Gathering and validating data

- So, how do we carry out this ‘exchange of data’?
- Typically by producing a report (or several!)
- Typically we are overwhelmed with data – but have little information!

“Reports and procedures should be kept to a minimum and only used when they save time and labour. They should be as simple as possible!”

Peter Drucker, The Practice of Management, 1955

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Gathering and validating data

- "….. kept to a minimum….."

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Gathering and validating data

- "….. kept to a minimum….."

Hmmmmm!

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Gathering and validating data

- What is a report?

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Gathering and validating data

- What is a report?
  - An explanation of why what was planned didn't happen
  - Written by someone who wasn't there
  - Addressing a question they didn't understand
  - Sent to a recipient who didn't ask the question
  - Presented to an audience that doesn't care
  - Asking for a decision that doesn't matter because its too late to affect the outcome of the next cycle

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Gathering and validating data

- The essence of communication may rest in having something to say!
  - A story to tell
  - A message to convey
  - A concern to share
  - A decision to get made

So, why are we so bad at it?

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Gathering and validating data

- The essence of communication may rest in having something to say!
- Why are we so bad at it?
  - We have too much data to assimilate adequately
  - We don't know what the message is
  - We are too concerned with 'what they want to hear'
  - We are not confident in our message
  - We have data, we NEED information

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  - We are too concerned with 'what they want to hear'
  - We are not confident in our message
  - We have data, we NEED information
    - Information is aggregated data that has meaning
    - Meaning is relative - direct (internal) or contextual (external)

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Gathering and validating data

- The essence of communication may rest in having something to say!
- Why are we so bad at it?

> If you think IT is the solution to your problems,
> then you don't understand IT
>
> and you don't understand your problem either!
>
> Joseph Rowntree Reform Trust, March 2009

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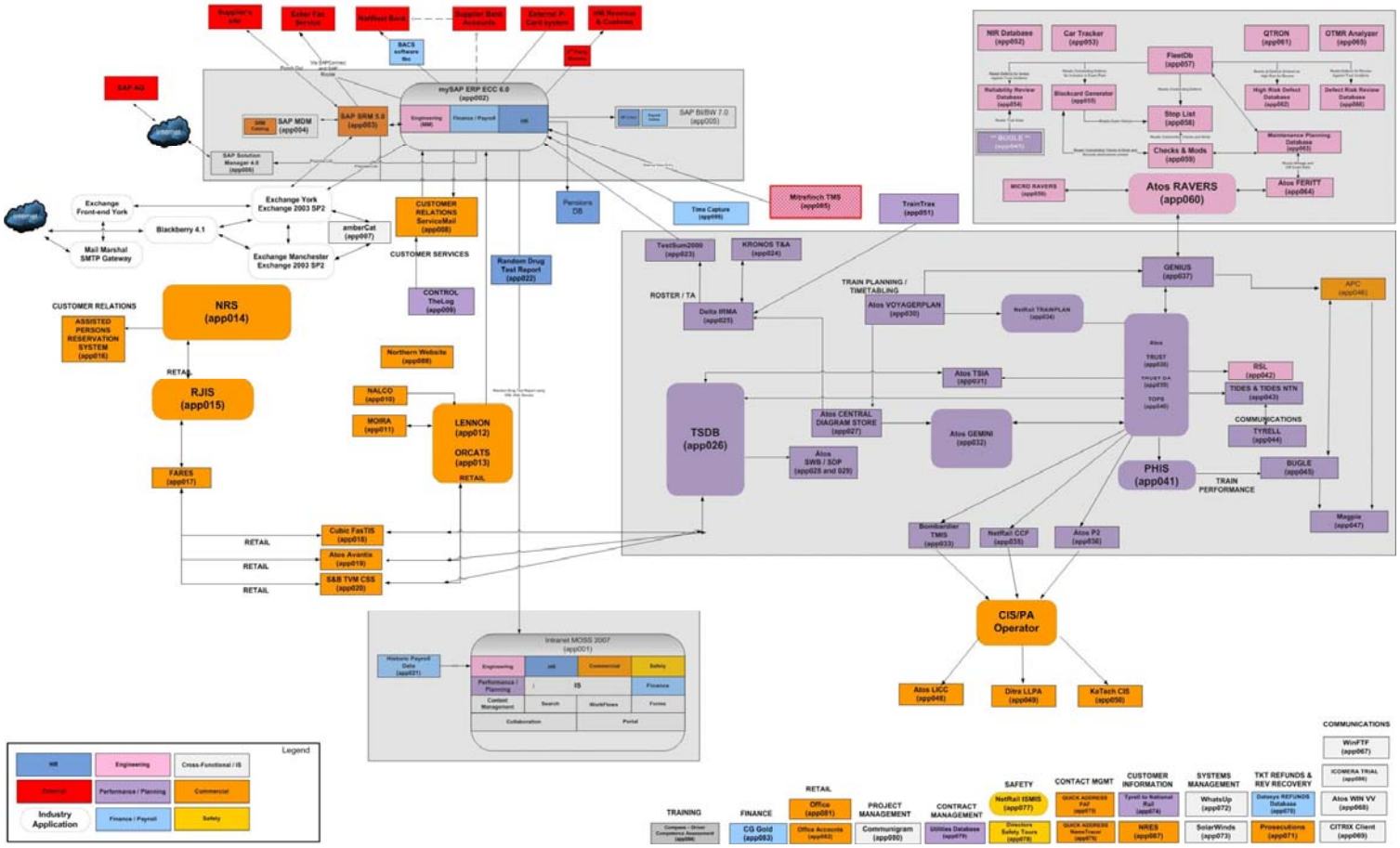
Gathering and validating data



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Gathering and validating data

150k excel spreadsheets

5000 access databases

103 business systems

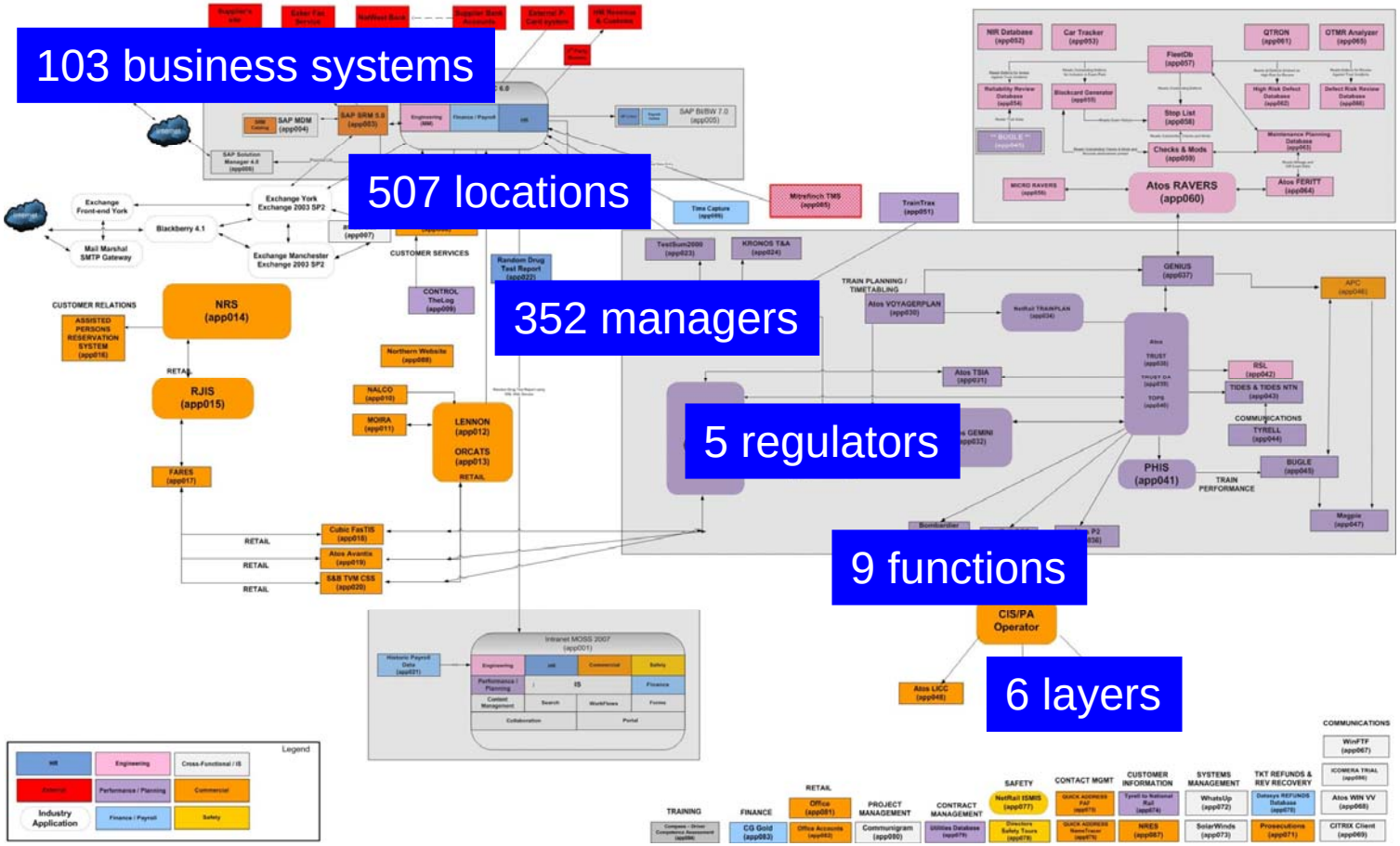
507 locations

352 managers

5 regulators

9 functions

6 layers



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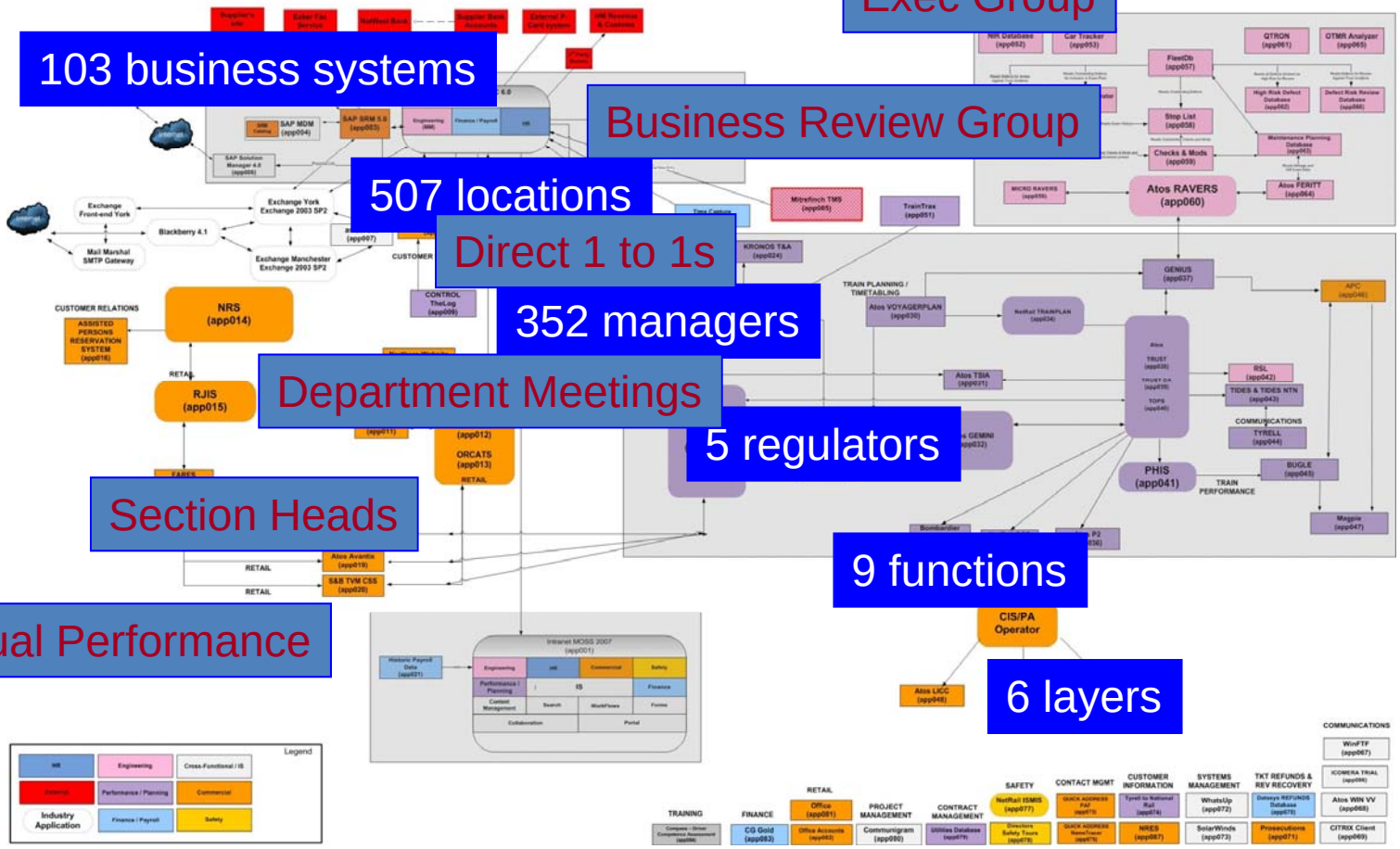

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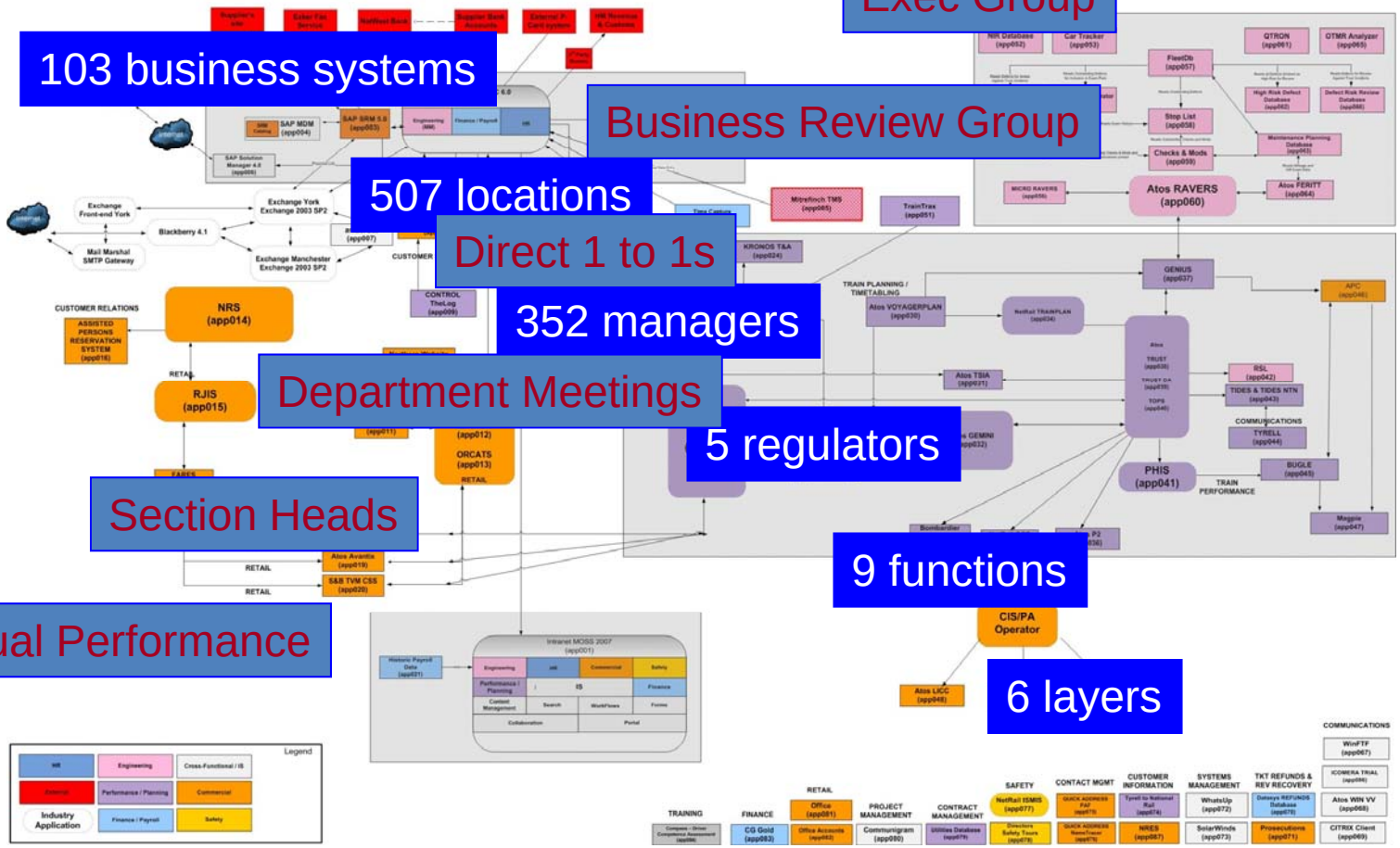

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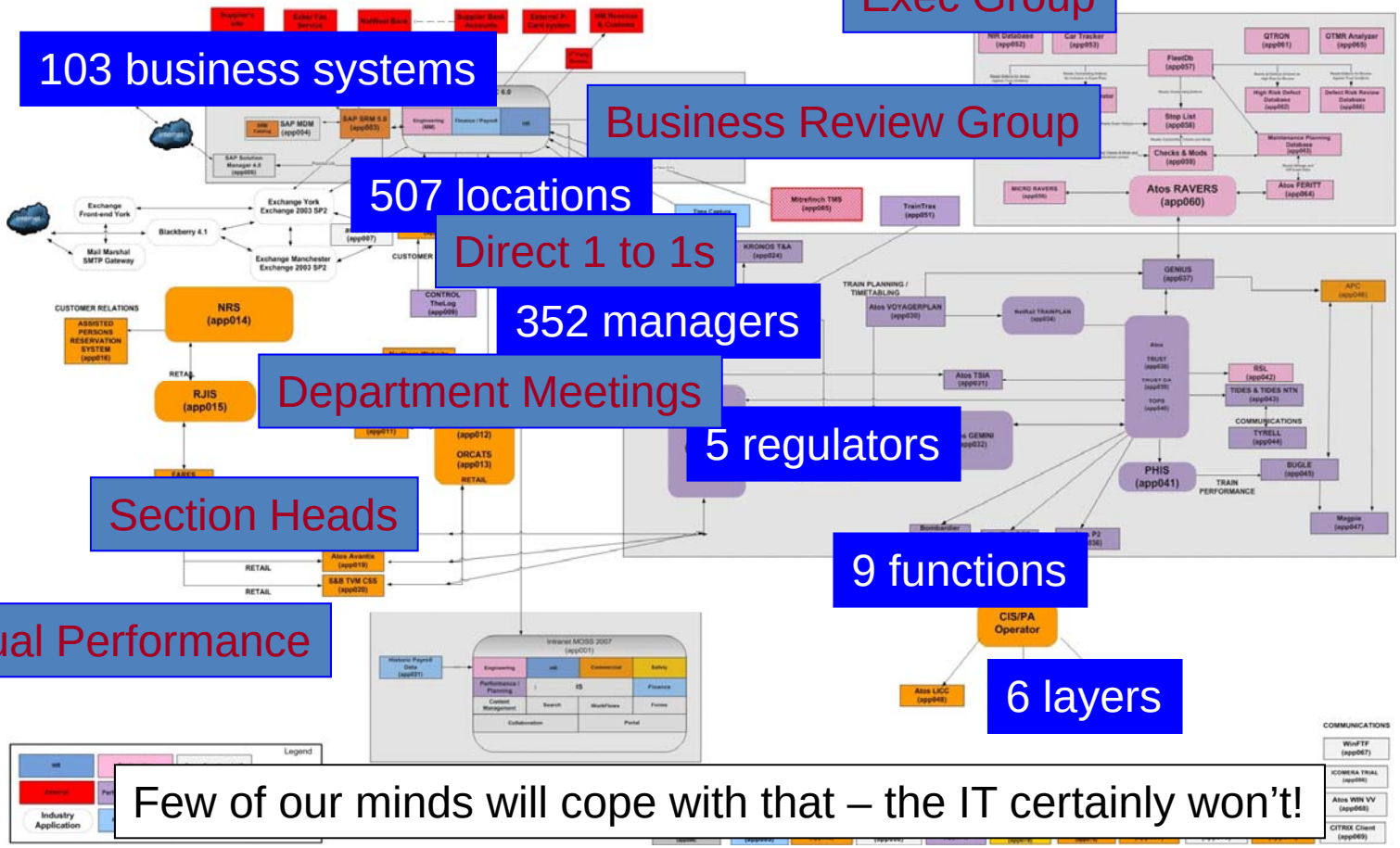

Few of our minds will cope with that – the IT certainly won't!

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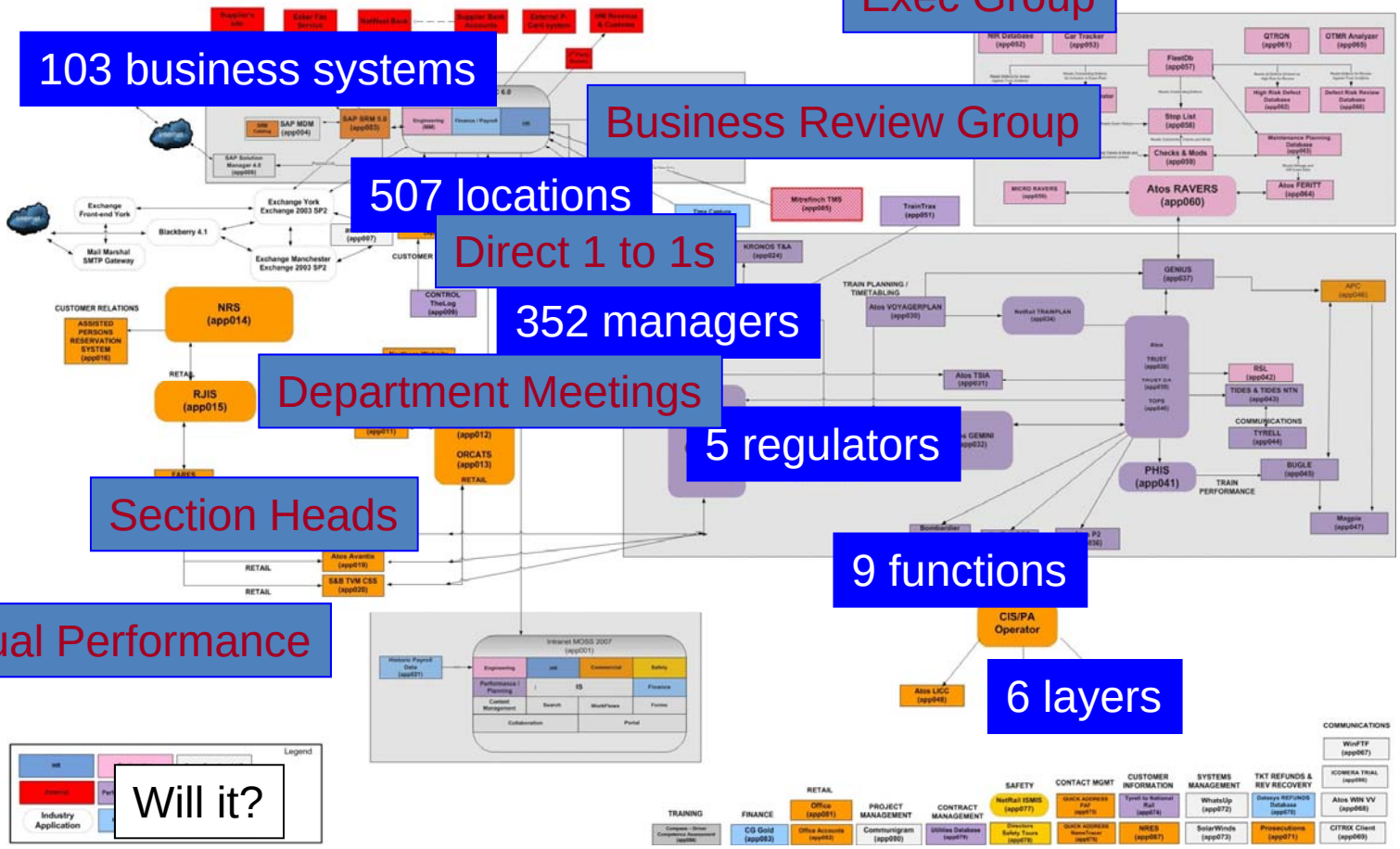

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Synthesising the argument

- A homeostat
  - a machine for synthesising the argument!

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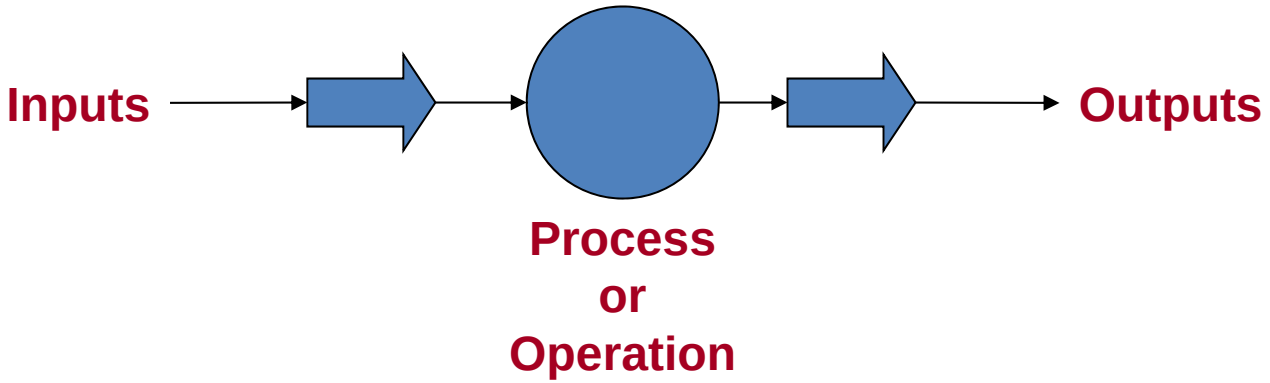
Synthesising the argument

- A homeostat



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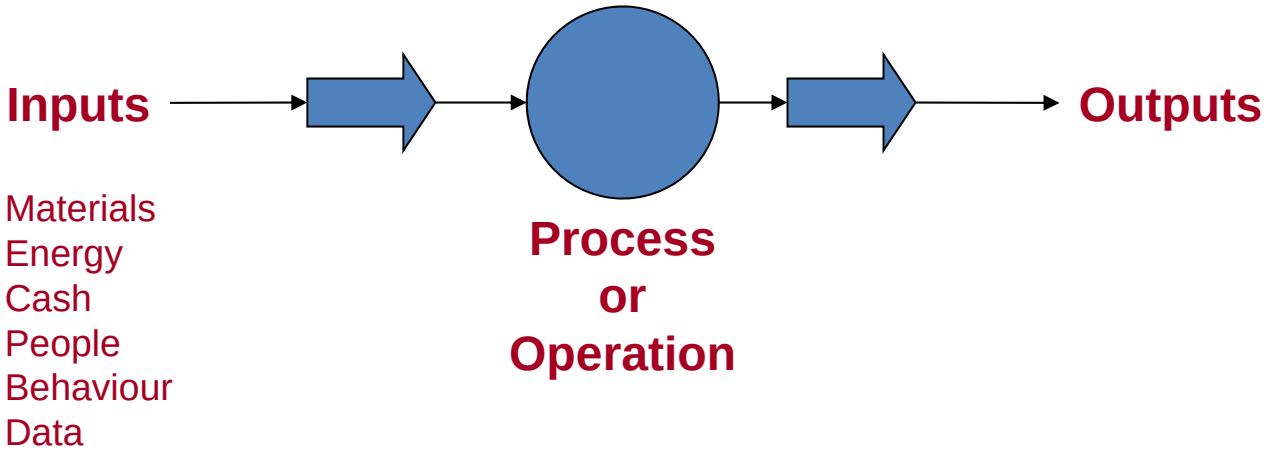
Synthesising the argument

- A homeostat



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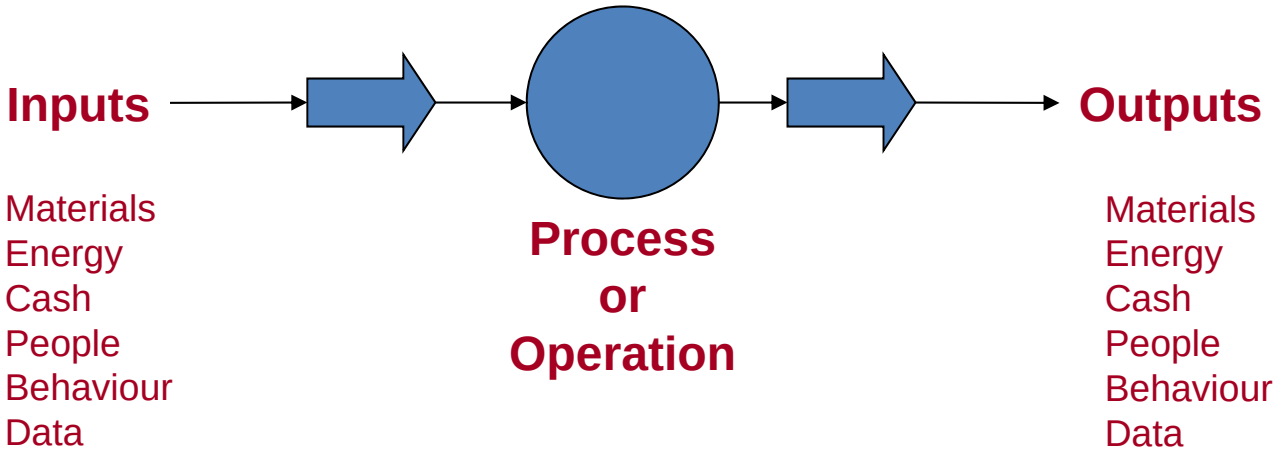
Synthesising the argument

- A homeostat



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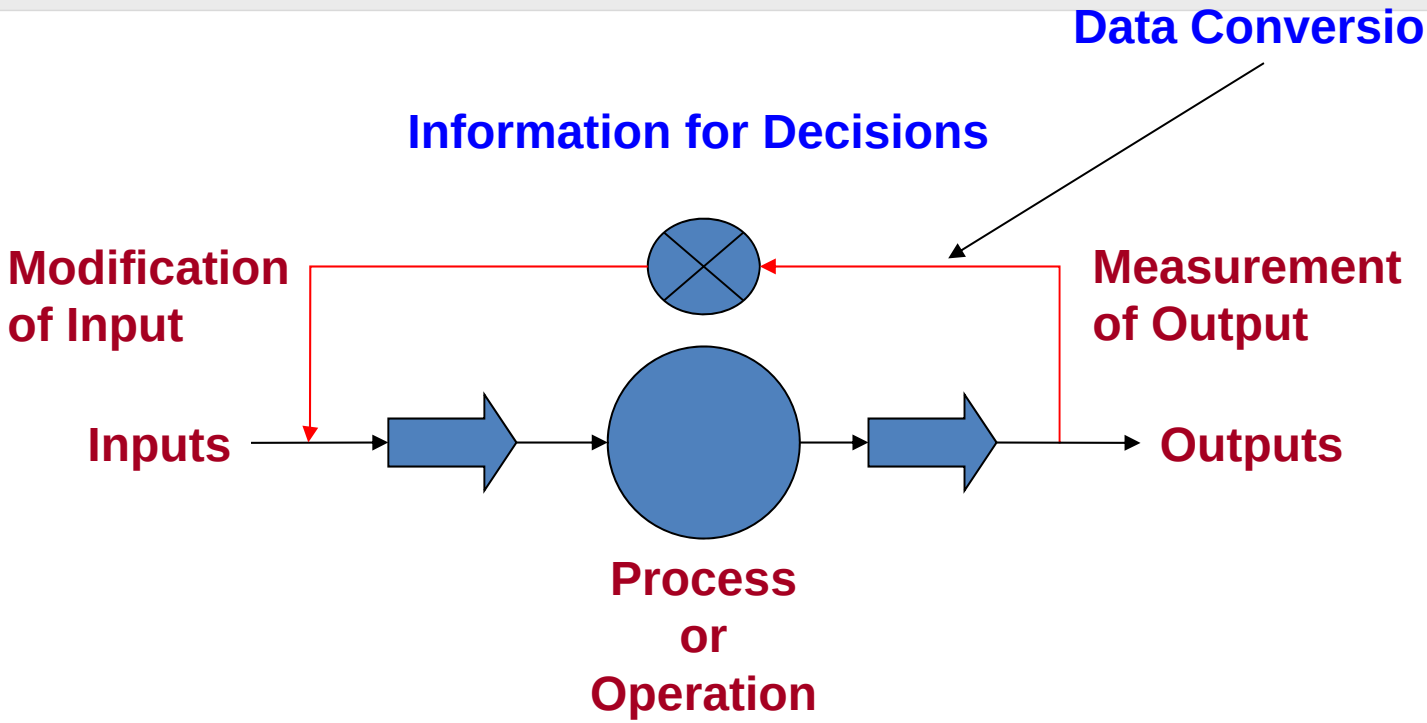
Synthesising the argument



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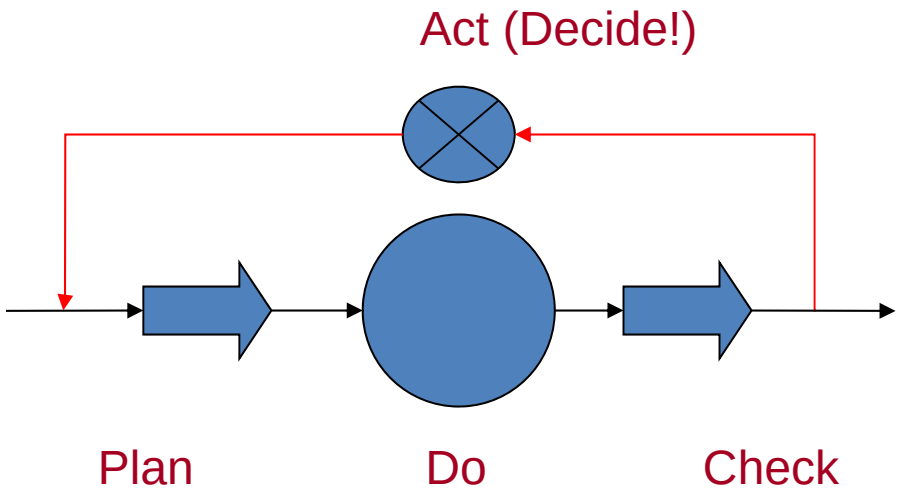
Synthesising the argument



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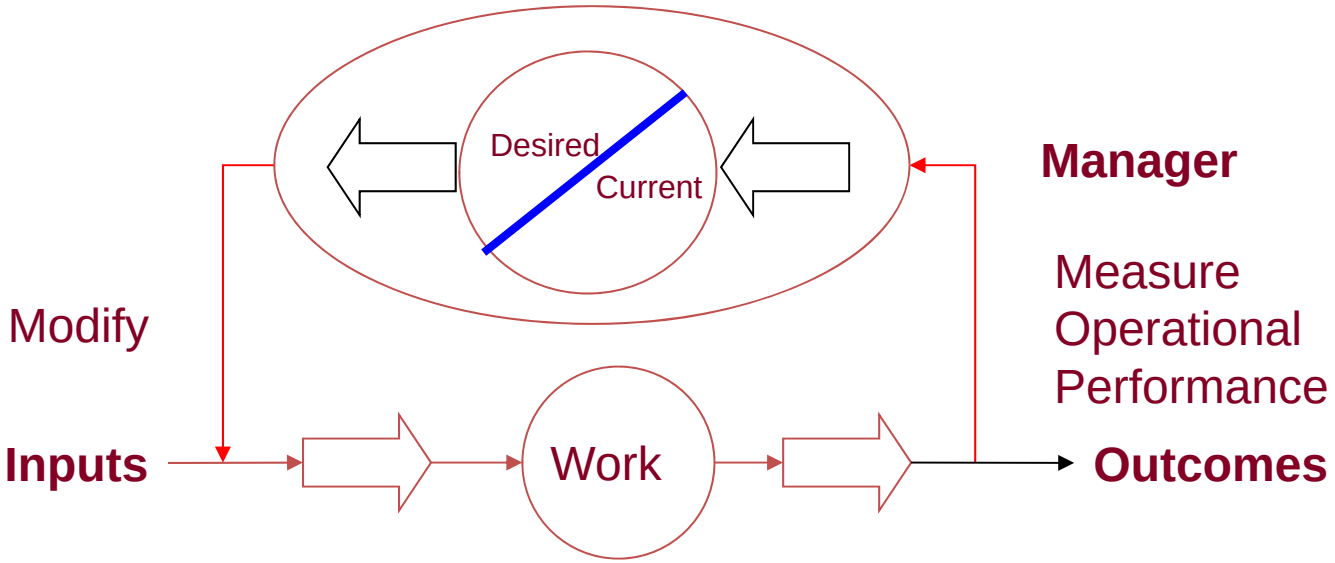
Synthesising the argument

Direct Relevance:
Did the actual (current) output of the process equal the desired output?



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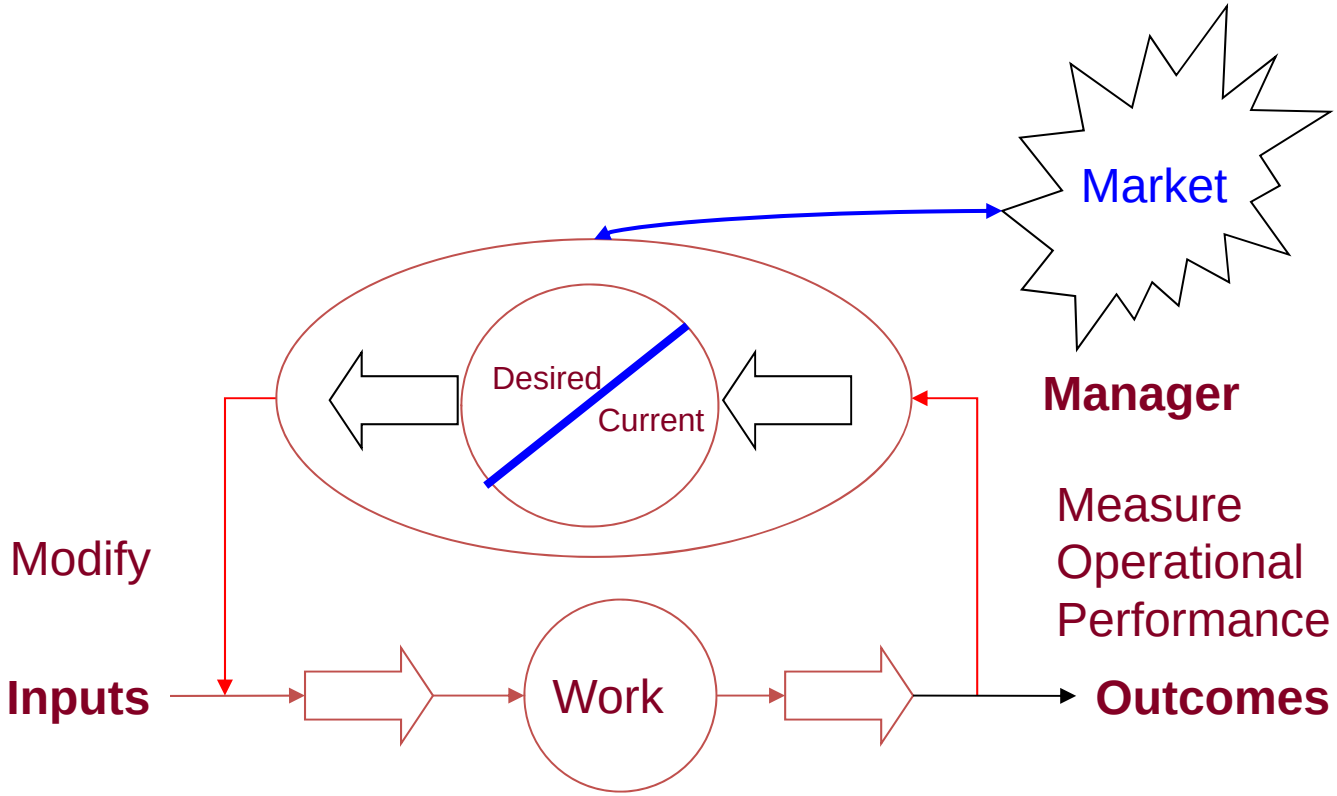
Synthesising the argument

Contextual Relevance 1:
Did the actual (current) output of the process equal the needs of the market?



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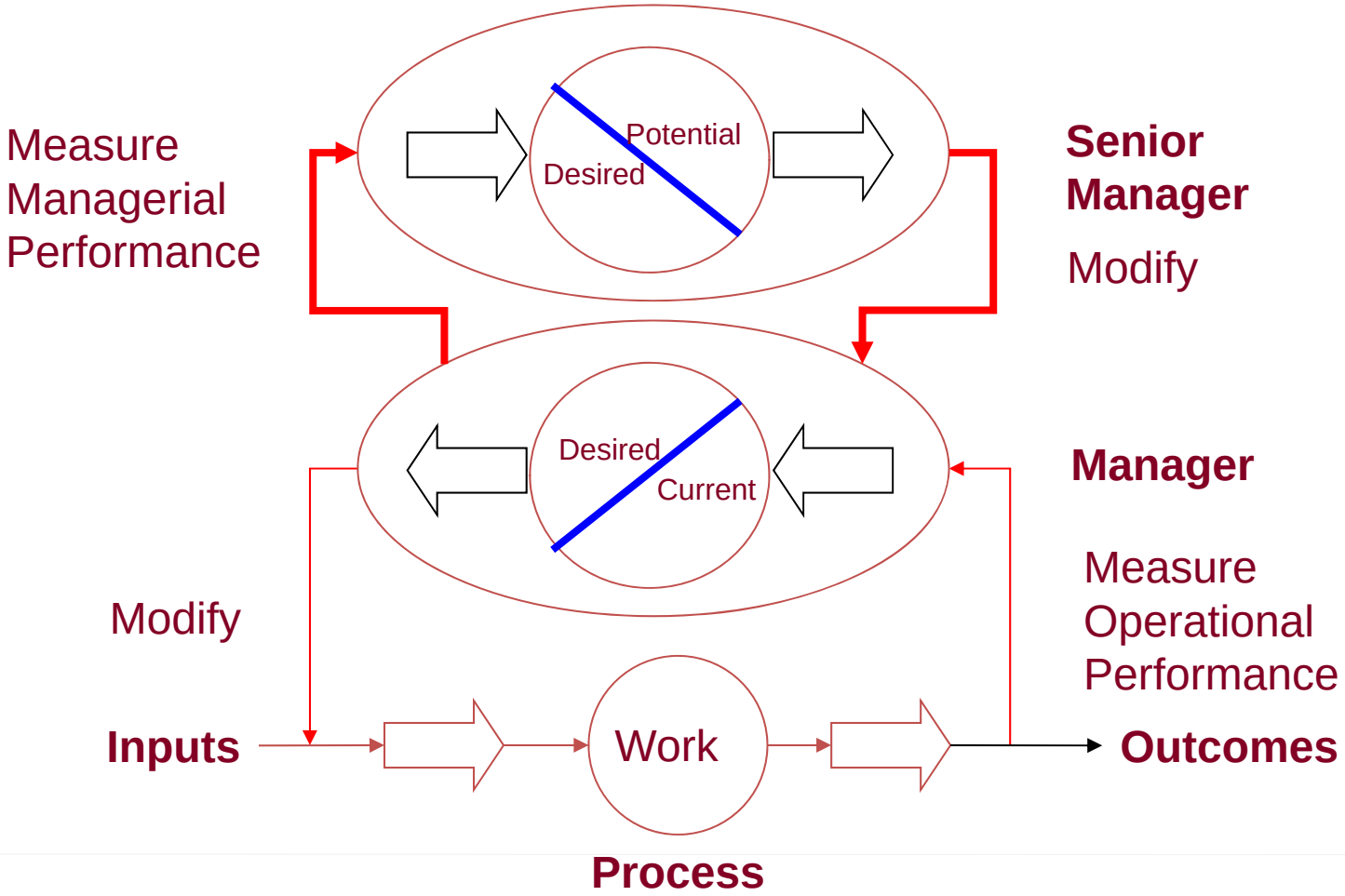
Synthesising the argument

Contextual Relevance 2:
Did the actual (current) output of the process equal the expectations of the boss?



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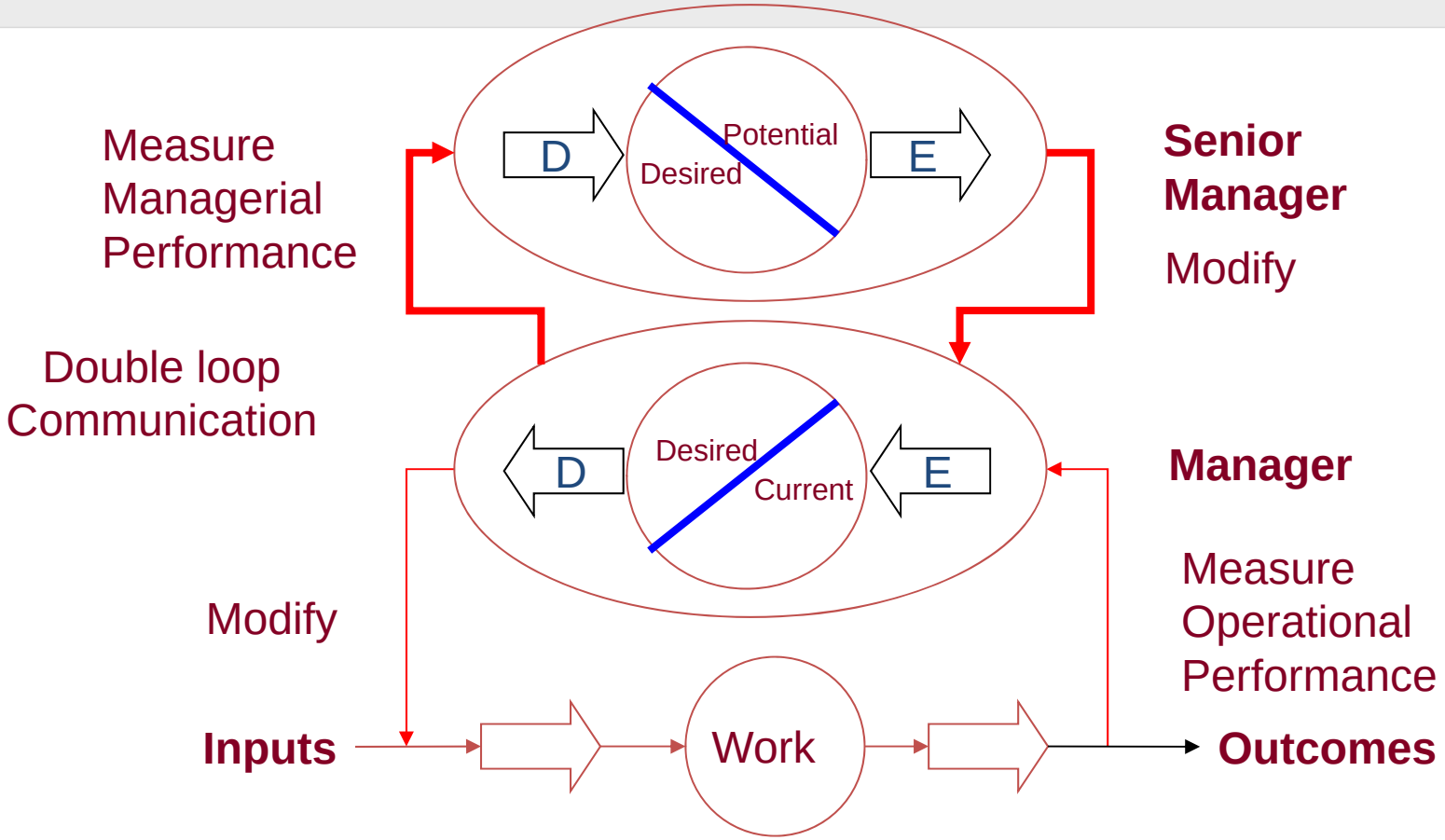

Process

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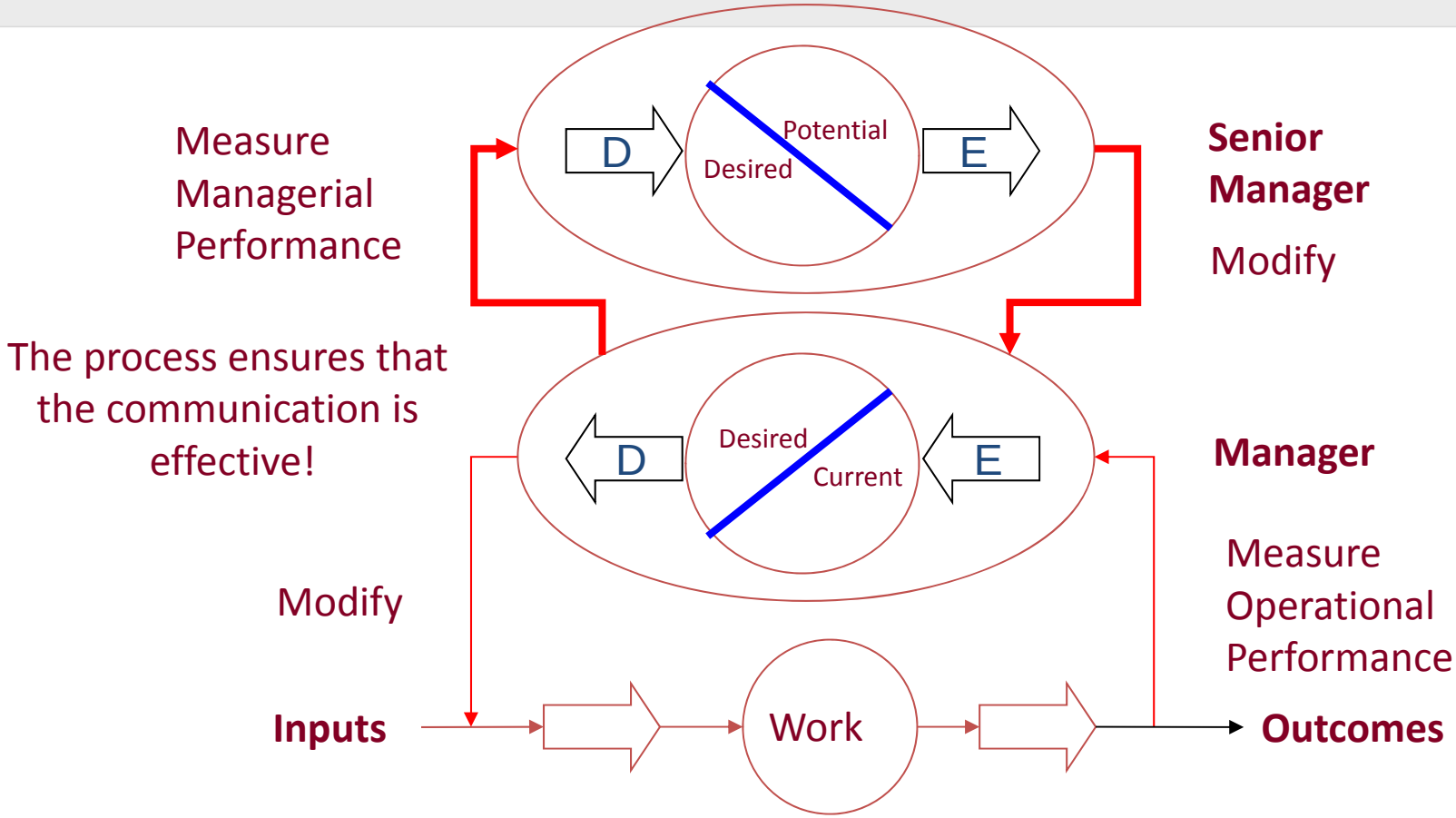
Synthesising the argument



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Presenting the argument

- Decisions are often programmatic
  - they are a function of a prior decision and a stated objective
  - the reports are needed to trigger the appropriate organisational response
    - Fix it, stop it, do it again, do it the same but faster, cleaner cheaper….
- IT can be great at
  - programmatic reporting
  - decision support
- Let's design systems that let the machines do well what THEY do well – and free the people up for the real work!
- Let's create…….

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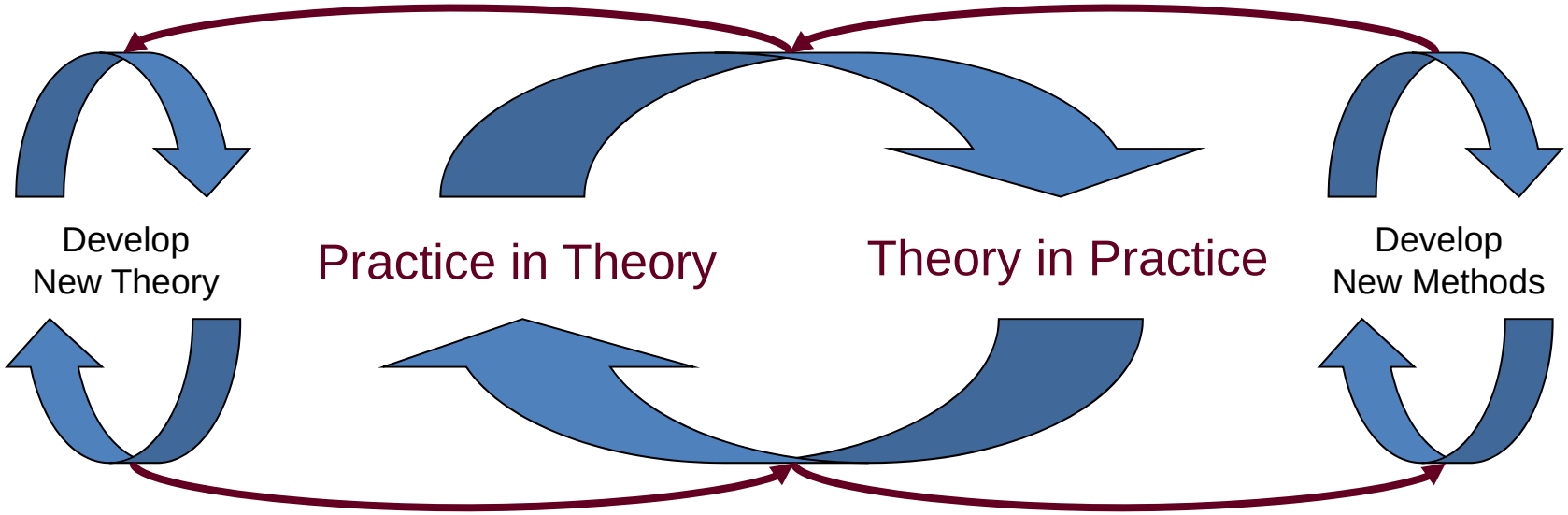
Virtuous Learning Cycle



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Real Life IT

John Beckford

Loughborough University, 3rd May 2012

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