Delivering Performance Improvement Project Challenge 2004

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Olympia
September 2004

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Overview

- Delivering Performance Improvement
  - Coherent understanding of project objectives and constraints
    - » "What does success look like?"
  - Appreciation of process interactions
    - » Explicit recognition of the inter-relationships
  - A dynamic process model
    - » Capability to simulate future events and conditions
  - Sustained performance improvement
    - » Learning how to be successful

The Project

- Bidding process for Sterile Supply Services to the NHS
- Small plc client (£100m turnover)
- Limited resources (people & money) to support the bids
- Multiple bids in course at any one time
- About 30 competitive tenders over 18 months
- Cost per bid £100k approx
- Investment required before FIRST success: £2m approx
- Timescale – ITT to Bid submission – 30 days
- Investment if bid successful - £10 m approx

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Sterile Supply Issues

- Essentially common process for each centre:
  - But, in each case, variations of:
    - » Work Volume
    - » Staffing Number & Shift Pattern
    - » Machine specification (with multiple machines) & Configuration
    - » Transport Requirements
    - » Performance Expectations & Constraints
  - Typical Case:
    - » 1 million events per annum
    - » 240 possible process routes
    - » Turnaround time 8 hours – 24 hours
    - » 150 staff, multiple shifts

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Reasons for Engagement

- Manual analysis of all possibilities not practicable
- Volume & frequency of bids uncertain
- Analytical and modelling expertise not employed in house
- Capability already demonstrated through pilot studies
- Need to be able to optimise performance overall – or maximise one variable

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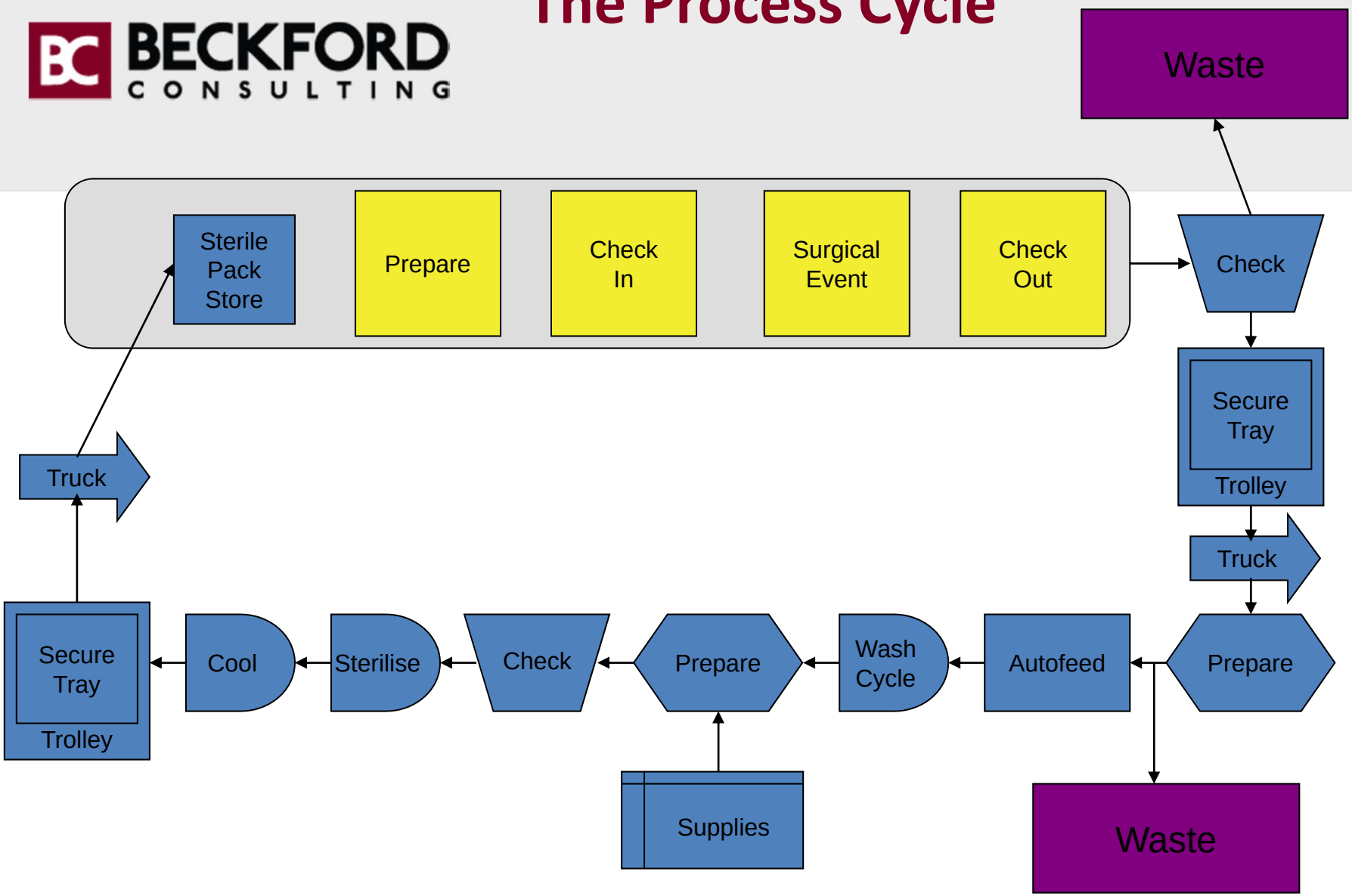
The Modelling Process

- The Modelling Process
  - Understand the overall process
  - Determine the characteristics of success
  - Identify the manageable variables
  - Identify those aspects which must be reported
  - Define:
    - The elements of the process
    - The characteristics of the
      - » People (skills, availability)
      - » Machines (capacity & throughput)
      - » Inter-relationship between stages
      - » The volume flow

The Process Cycle



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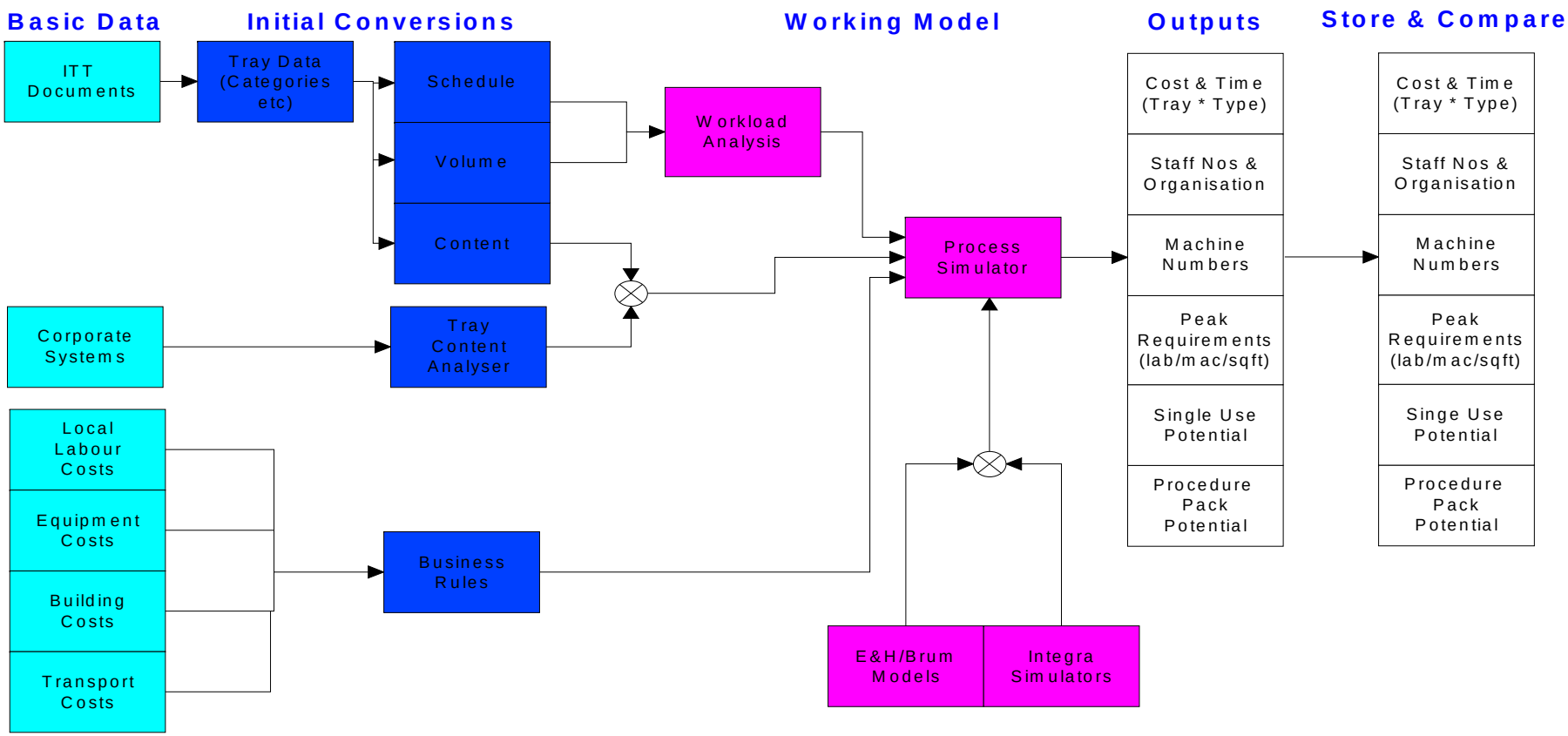
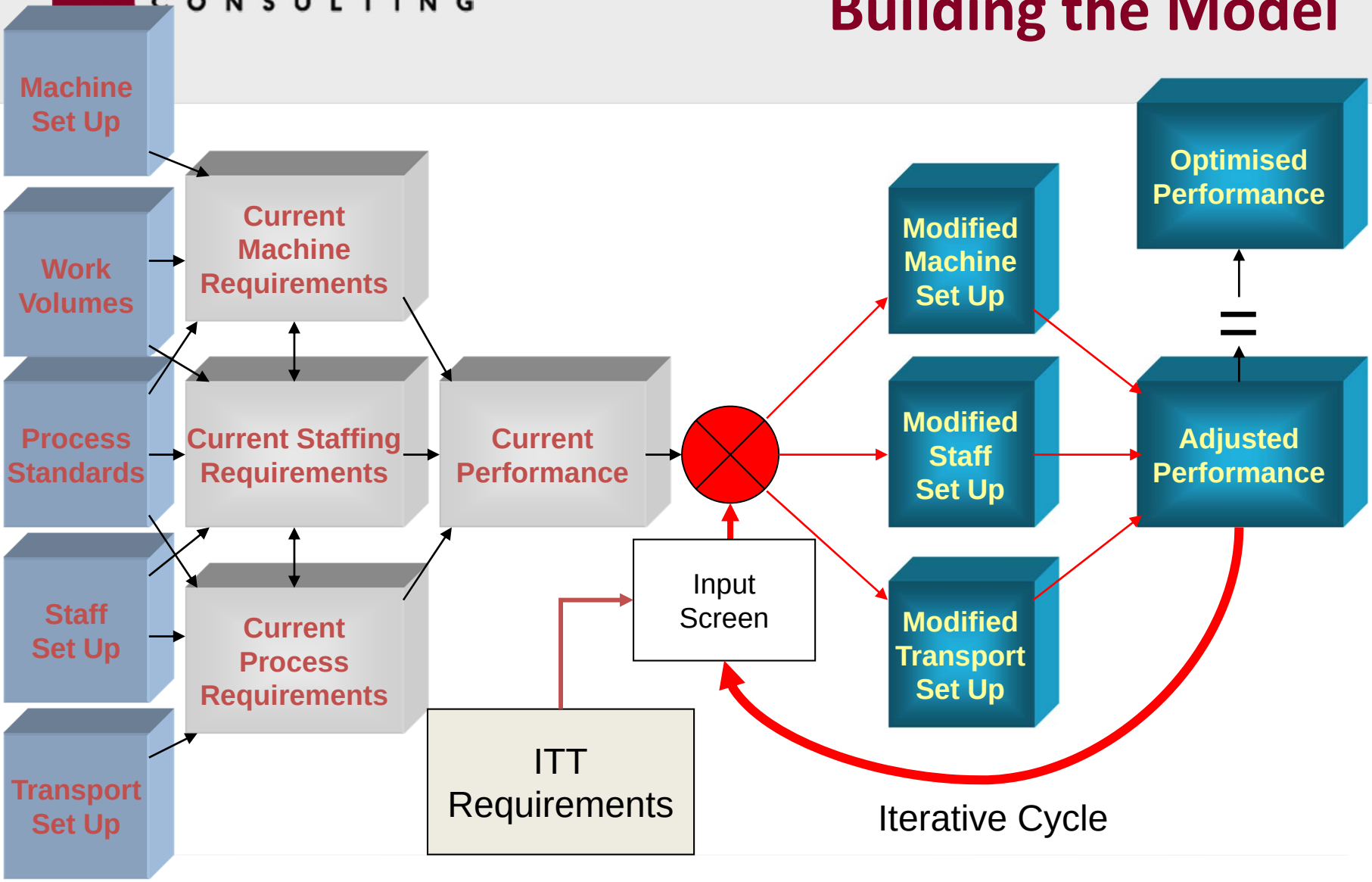
Decontamination Centre: Model Elements



Building the Model



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Modelling Outcomes

- Results fed into financial model – which becomes in turn more robust
- Enables
  - » multiple scenarios to be created for each instance
  - » testing of assumptions
  - » 'live' optimisation as part of 'sales' process
  - » impact of variant bids to be easily demonstrated (and impact of late changes by Authority to be easily accommodated)
  - » Easy transfer of 'acquired' knowledge
  - » Embedding of output in bid documentation
- Ensures consistent approach
- Simplifies choices between competing tenders
- Analysis timescale reduced from 10 man days to 2 man days per bid
  - » Cost saving - £360k over the life of the bidding project (18%)

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Applied Outcomes

- Model tested and validated in a live situation
- Analysis correctly identified:
  - Bottlenecks (machines and people)
  - Causes of delay
  - Causes of increased costs
- Change programme in course which will:
  - Reduce cycle time from 23 hours to 11 hours
    - » Significant benefit to end users
    - » Significant increase in performance related income
  - Eradicate overtime (£50k/annum)
  - Reduce headcount by 10% (£80k/annum)
  - Enable implementation of 'real time' performance management
    - » Supports continuous review and improvement

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- Understand:
  - What SUCCESS means
  - The WHOLE process
  - The INTERACTIONS
  - The DETAIL of the parts
  - WHAT the MODEL needs to do
  - WHY it needs to do that
  - HOW you intend to INTERACT with it
  - WHO will USE it
  - WHAT the LIMITATIONS are