



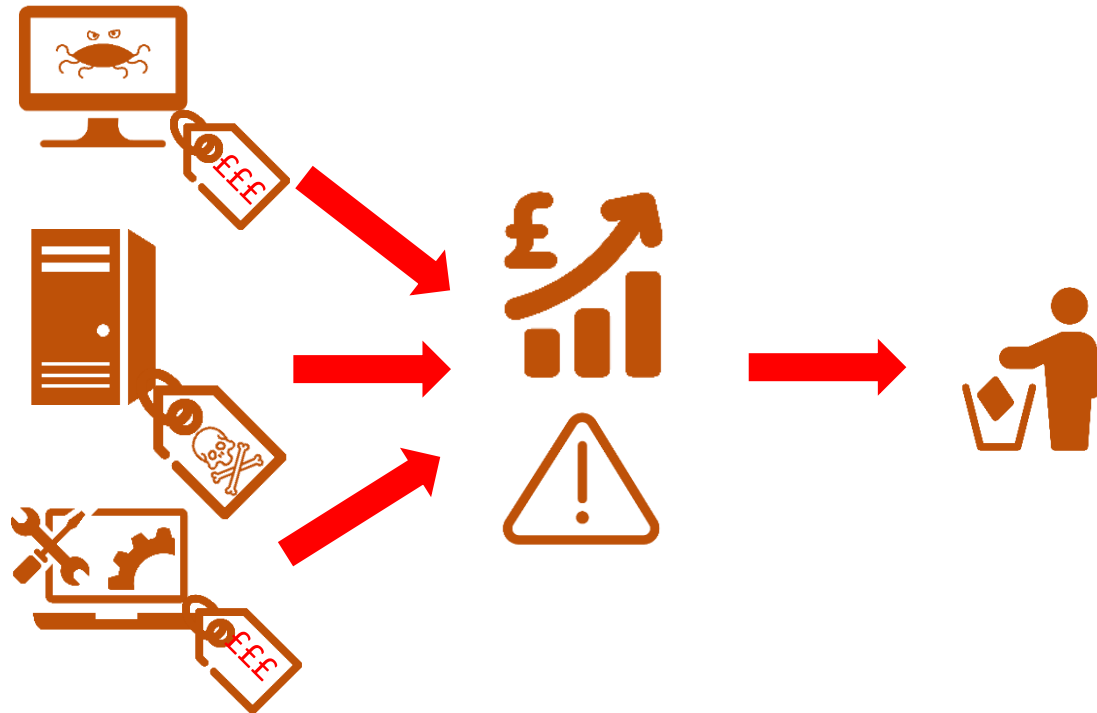
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# **Legacy Software Systems**

## **Should I stay... Or, should I go?**

Dr Julian Bass, Computer Science and Software Engineering

# Should I stay...?



- Legacy systems

- Increasing cost of maintenance
  - 40 year lifetime cost £800M
- Vulnerable to vendor market strategy change
  - End of life
- Increasing cost of repair and enhancement

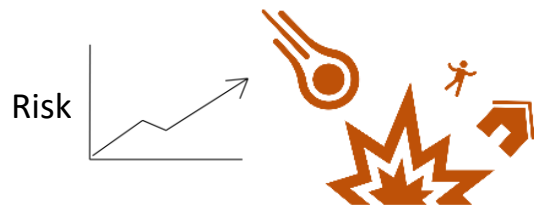
- Vendor lock-in



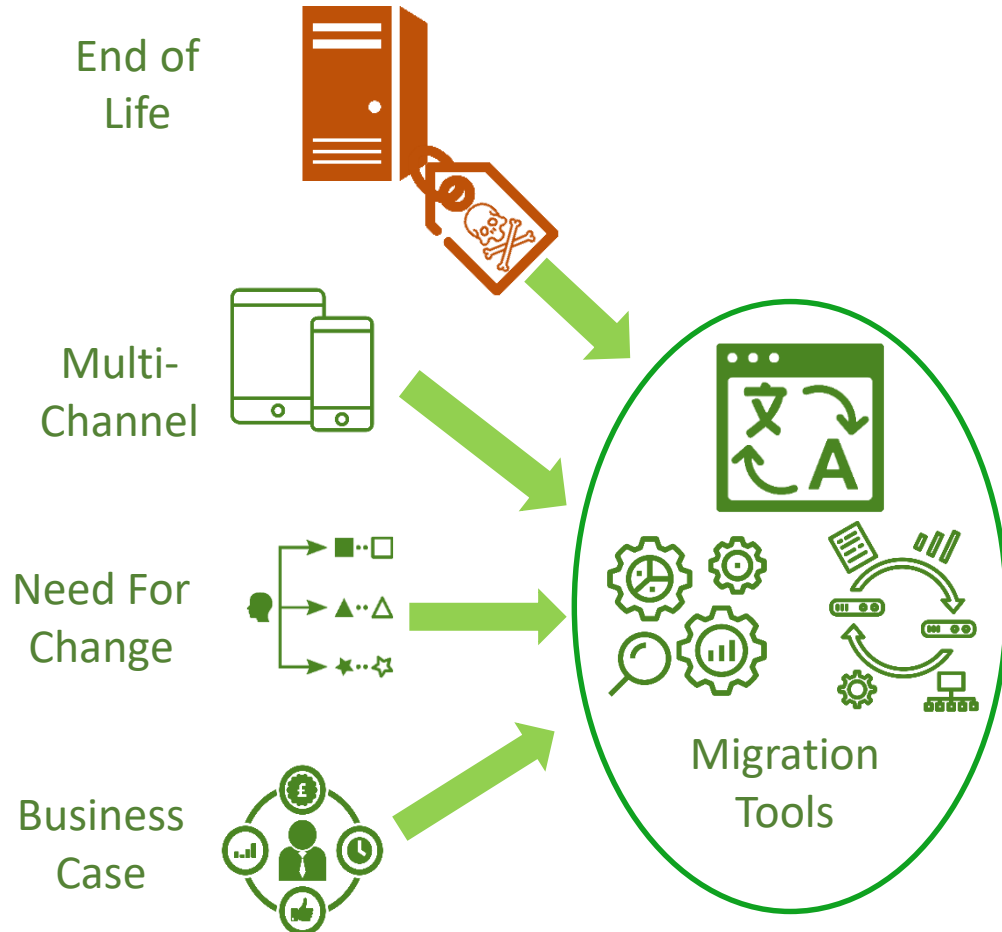
# Should I stay... Or, should I go?



- Should I stay...
  - Increasing risk of catastrophic failure
    - Risk to beneficiaries and users
    - Reputational damage
  - High severity risk
- Or, should I go?
  - Forced by regulatory change
    - GDPR?
  - Impossible to adapt
  - Unthinkable throw away costs



# Or, should I go?



- Migration Justified by
  - End-of-life
    - End of vendor support
  - Business case
    - Clear business benefit
  - Need for change
    - New features needed
  - Need for
    - multi-channel user support
    - micro-service architecture solutions
    - Containerised solutions

# Salford Software Lab - Benefits

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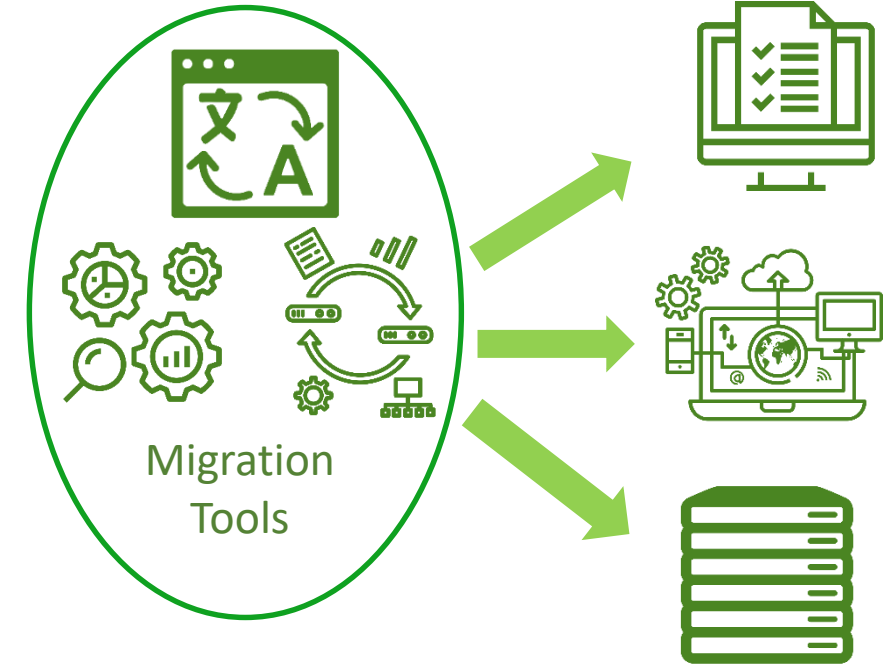


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- Reduce migration project duration
  - Enhance productivity
- Improve speed of assessment
  - Faster decision-making
- Mitigate migration risk
- Second opinion on brute-force manual processes
- Low cost of entry
- Ease of exit, if not satisfied

# Salford Software Lab - Process

- Proven Innovation Pipeline
- 5 Stage Innovation Process
  1. Study your challenge, in your context
  2. Proof of concept
  3. Minimum viable product
  4. Deploy and refine
  5. Productise and scale
- Or, choose your own approach



# Salford Software Lab - Technologies?



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- Technology options to meet your needs
  - Language (semantic) analysis
  - Source code visualisation
  - Cross compilers
  - Code translators
  - LLVM front-end technologies
  - SaaS and cloud architectures
    - Multi-tenancy
    - Micro-service solutions
    - Elasticity

