Adding Value Through Outsourcing Testing Related Risk

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Objectives

❶ Explore why organisations seek to outsource ***testing related risk***.

❷ Develop ***test management considerations*** for managing projects of this nature.

❸ Illustrate how this has been applied to implementing ***regression test packs***.

❹ Suggest how ***added value*** can be gained from outsourcing testing related risk.

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❶ Why outsource risk?

- "Can you {the supplier} fix price?"
- Common {client} reasons
- General examples
- Some experiences…
  - What is reasonable?
  - What is realistic?

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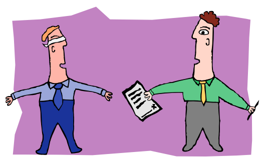
"Can you fix price…?" ❶

"… yes, *if* you can give me something to fix on?"



Further Questions:

- What risk are you looking to outsource?
- Why do you want to outsource this risk?
- Will I own the whole risk?
- How will *we* control that?
- Is this about *partnership*?

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Common reasons ❶

- General Risks
  - History of going over (testing) budget
  - Lack of confidence as to whether can test adequately within the project timescales
- Specific Risks
  - An aspect of testing is integral to the project's success
  - Lacking in capability to undertake that aspect of testing

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General examples ❶

- General Regression Test Automation
  - Complexity/investment underestimated
  - Additional process & control considerations
  - Technical expertise required
- Specialised Regression Test Automation
  - Y2K {Time travel}
  - Euro {Currency conversion}

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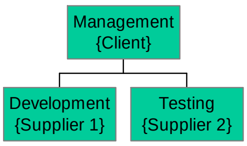
Is it reasonable? ❶

Example 1:
Client wished to outsource development and testing to different suppliers.



- Questions {& *Answers*}
  - Fault level {*assumed low*}
  - Turnaround SLA (*none*}
- Unreasonable
  - Can't fix on test execution
  - Unlimited execution cycles
- Driver {& *Result*}
  - Client wants to fix cost
  - *We went Time & Materials*

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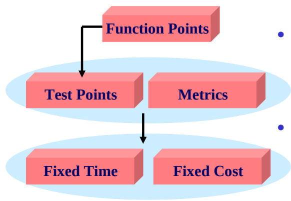
Is it realistic? ❶

Example 2:
Client wished to outsource testing with function point driven estimates.



- Questions {& *Answers*}
  - Why {*move up CMM*}
  - Current level (*CMM L2*}
  - Change control {*No!*}
- Unrealistic
  - CMM level too low for FPA
  - Change control essential
- Driver {& *Result*}
  - Client wants a partner
  - *We went Time & Materials*

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❷ Test Management Issues

- The Test Plan – Assumptions or Risks?
- General Risk Areas
- Boundaries – System Testing stage
- A basic regression test pack process
- Automated test pack considerations
  - The software-testing-software model

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Assumptions or Risks? ❷

"There are no assumptions, only risks."

Test Plan

Time & Materials		Fixed Price
•Constraints		•Constraints
•Dependencies		•Dependencies
•Assumptions	Versus	•Client Risks
•Risks		•Supplier Risks

Client & supplier risks will tend to be 'paired off'.

They will need to be controlled and, if possible, measurable.

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General Risk Areas ❷

- Subject Matter Expertise {SME}
  - The Oracle Assumption
    - Oracle: *"a mechanism to produce the predicted outcomes to compare with the actual outcomes of the software under test"* {BS7925-1}
- Test Execution
  - Significant aspects outside the testers' control
    - Number of faults, and execution cycles required
    - Fault turnaround time
    - Regression levels

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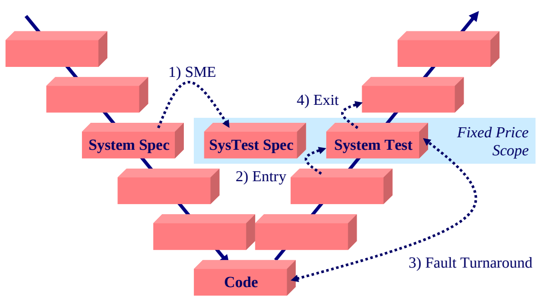
System Testing Boundaries ❷



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Regression Test Pack Process

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Stage	Input {Oracle}	Output {Sign Off}
1. Test Specification	Subject Matter Expert	Test Specification
2. Test Pack Build	Test Specification	Test Pack Baseline
3. Test Execution	Test Pack Baseline	Test Results/ Test Report

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Software-Testing-Software

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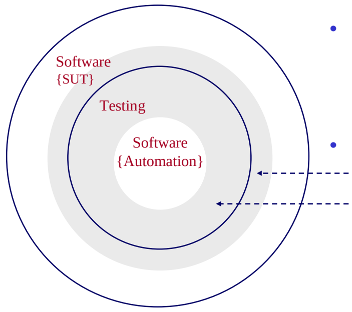

- Automated Regression Testing
  - Using software to test software
- SME {grey area}
  - Outside testing
  - Within testing
  - Both

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❸ Regression Test Pack example

- Automation specific risks
- Automation Maturity Model
- Software-Testing-Software Boundaries
  - Option 1: Process & Technical Support
  - Option 2: Managed Service
- Relative Risk

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Automation specific risks

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Risk Area	Comments
1. Test Process	Pre-requisite for tools. Tools may not be aligned.
2. Automation Architecture	Can take one elapsed year to establish properly.
3. Script Development	Can become the project's critical path.
4. Execution Elapsed time	Can be extended rather than reduced if scripts are not robust and not tested.
5. Script Maintenance	Optimistic CBAs are often invalidated when script maintenance isn't included.

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Test Automation Maturity Model

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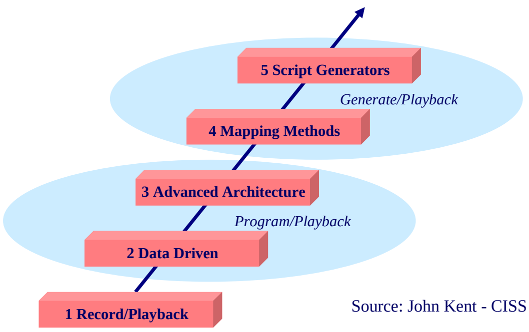

Source: John Kent - CISS

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Process & Technical Support

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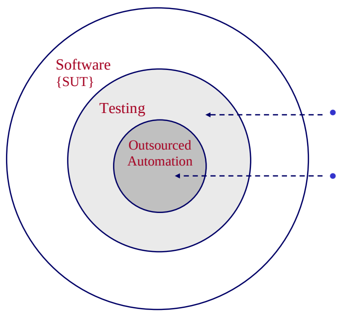

- Client Testing
  - Test Analysts
- Supplier Support
  - Process Support
  - Technical Support

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Managed Service

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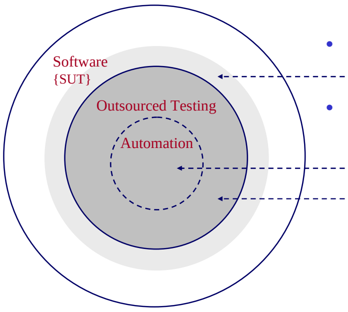

- Client Support
  - SMEs
- Supplier Testing
  - Process Support
  - Technical Support
  - Test Analysts

Relative Risk

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Risk Area	Manual Scripts	Programmed Scripts	Generated Scripts	Risk Owner
Test Process	Low	High	Medium	Supplier
Automation Architecture	N/A	High	Low	Supplier
Script Development	Low	High	Medium	Supplier
Execution Elapsed time	Medium	High	Low	Client
Script Maintenance	Low	High	Medium	Supplier

❹ Where is the added value?

- Project Focus
  - One off. Client does not need to gain capability.
- Managed Service
  - Ongoing. Client never gains capability
- Skills Transfer
  - Managed Service initial test pack build
  - *Enable* client to maintain/extend test pack
  - Client in control of 'next steps' options

Supplier Layers

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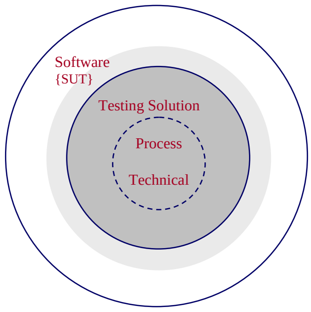

Skills Transfer:

- Client to Supplier
  - Subject Matter Expertise
- Supplier to Client
  - Test Pack
  - Process
  - Technical

Supplier Profiles

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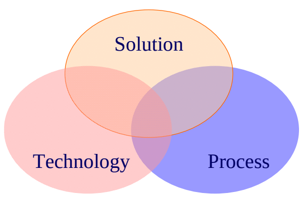

- Can the supplier fill the required role(s)?
- Is the supplier flexible?
  - Role combination matched to client requirement…
  - …as opposed to single solution offered.

Summary

❶ Establish whether the reasons for outsourcing risk are ***reasonable and realistic***.

❷ ***Agree the boundaries*** for managing this risk, together with tangible parameters.

❸ ***Some outsourcing scenarios add risk*** to projects, but there are examples that work.

❹ Outsourcing testing is a 'means to an end'. ***Value is added by suppliers enabling clients to undertake the outsourced testing in future***.