Testing

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P&G

Agenda

- A quick word on understanding work process

- The 3 Stages of testing

- How we plan & mange testing

- Q&A

I am the business expert

- Remember P&G aren't IT vendors we operate in the realms of business +technology (so try and see it from that perspective)

- I visit the customer

- I understand their work-processes

- I am in a position to know what the systems needs to do

- Therefore I am accountable for its success

- I "Match and Map" to the existing solution or work with vendors to build new capability.

3 Stages of Testing

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Any ideas?

Stages of Testing

- Unit Testing
  - "Each bit seems to work in it's own right"

- Situation Acceptance Testing
  - "Nice! Everything _seems_ to work together end to end"

- Business Acceptance Testing
  - "Real data validated i.e. everything _does_ work together end to end"

Unit Testing

- Who's involved?
  - The **development team** only

- What's it's purpose?
  - To ensure that there are no "**technical errors**"

- What's not tested?
  - That the correct data is displayed
 - Links between that 'unit' & other 'units'

How does this apply to SCLS?

- What methods and classes are you creating?
  - Loading Orders?
  - createReport([some variable])?

- What's the 1st way you normally find out if there's a **technical error** in your code?

- Compile as you go is a type of unit test.

- Call methods and make sure they don't throw errors (might have to mock up some variables)
  - Hence the benefit of OOP as long as you know you receive an "int" and give a "string" (for example) you can work with that
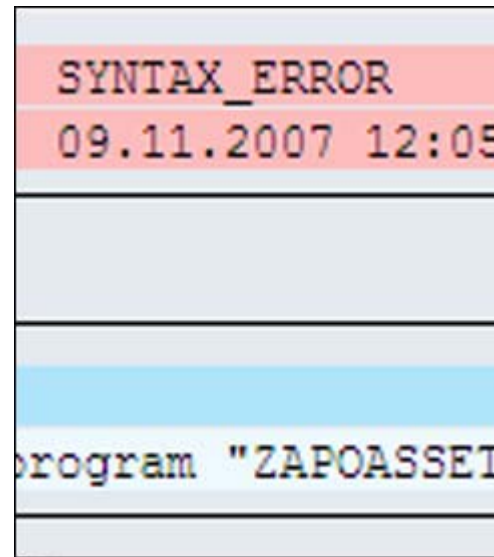
Unit Testing in P&G

- An example;
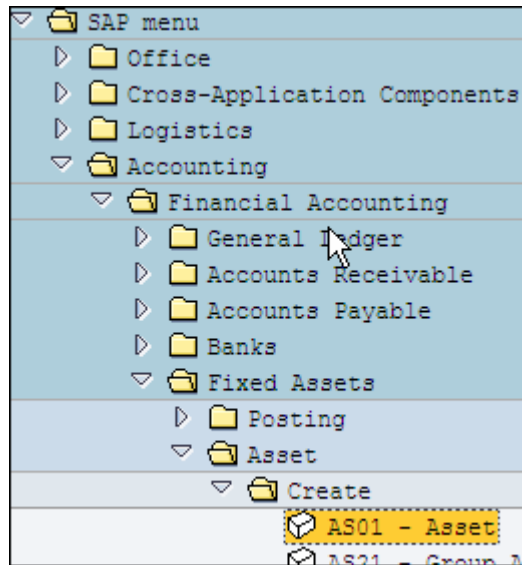
Is the report in the menu?

Does it give you a programming error?

Unit Testing

- Check-step
  - How many issues were **encountered**?
  - How many issues are still **open**?
  - How many of the open issues are **critical**?

- Have the **success criteria** been met?

- Unit testing **sign-off** is given. (we'll cover tracking later)

System Integration Testing

- Who's involved?
    - The **development team** only

- What's it's purpose?
    - To ensure **end-to-end processes** work
    - To ensure data "looks sensible"
    - Others; e.g. security access
    - You're confident the application should work given real data!

- What's not tested?
    - That the correct data is displayed

How does this apply to SCLS?

- Really important for this exercise because of your groups

- You need to make sure:
  - Methods are calling each other
  - Passing correct variable types etc
  - No errors are occurring

- How are your groups split up? Does the application appear to work as expected?
  - E.g. when a order is uploaded is the application able to check the stock?

- Need to test the functionality end to end.
  - Dry run before you involve real data.

System Integration Testing

- An example;

Create Asset: Initial screen

Master data	Depreciation areas

Asset Class	100FR010
Company Code	310
Number of similar assets	1

Create Asset: Master data

	Asset values

Asset	INTERN-00001	0		
Class	100FR010	Building -Admin/Com.	Company Code	310

General	Time-dependent	Allocations	Origin	Net Worth Tax	Insuran

General data

Description	Building in France
Asset main no. text	
Acct determination	100FR010 Buildings - Admin et commercial
Serial number	32987492387
Inventory number	97326-754
Quantity	
	Manage historically

✔ The asset 100000053842 is created

System Integration Testing

- Check-step
  - How many issues were **encountered**?
  - How many issues are still **open**?
  - How many of the open issues are **critical**?

- Have the **success criteria** been met?

- ... SIT testing **sign-off** is given.

Business Acceptance Testing

- ## Who's involved?
  - **Key users**, supported by the development team

- ## What's it's purpose?
  - To ensure **end-to-end processes** work
  - To ensure data is correct
  - Others; eg security access

- ## What's not tested?
  - **<u>Nothing</u>**

How does this apply to SCLS?

- I guess this is probably a step too far for this project.

- BAT would take place when:
  - you have won the contact
  - your development is complete
  - You want the user to test the functionality end to end

- Real data, validated at each step – very labour and time intensive

Business Acceptance Testing

- It's nearly the same!

Business Acceptance Testing

- Check-step
  - How many issues were **encountered**?
  - How many issues are still **open**?
  - How many of the open issues are **critical**?

- Have the **success criteria** been met?

- **Business** sign-off is given:
  - All key users agree that the system works exactly how it should and they are happy for the system to be deployed

Project Management Balance Quadrant
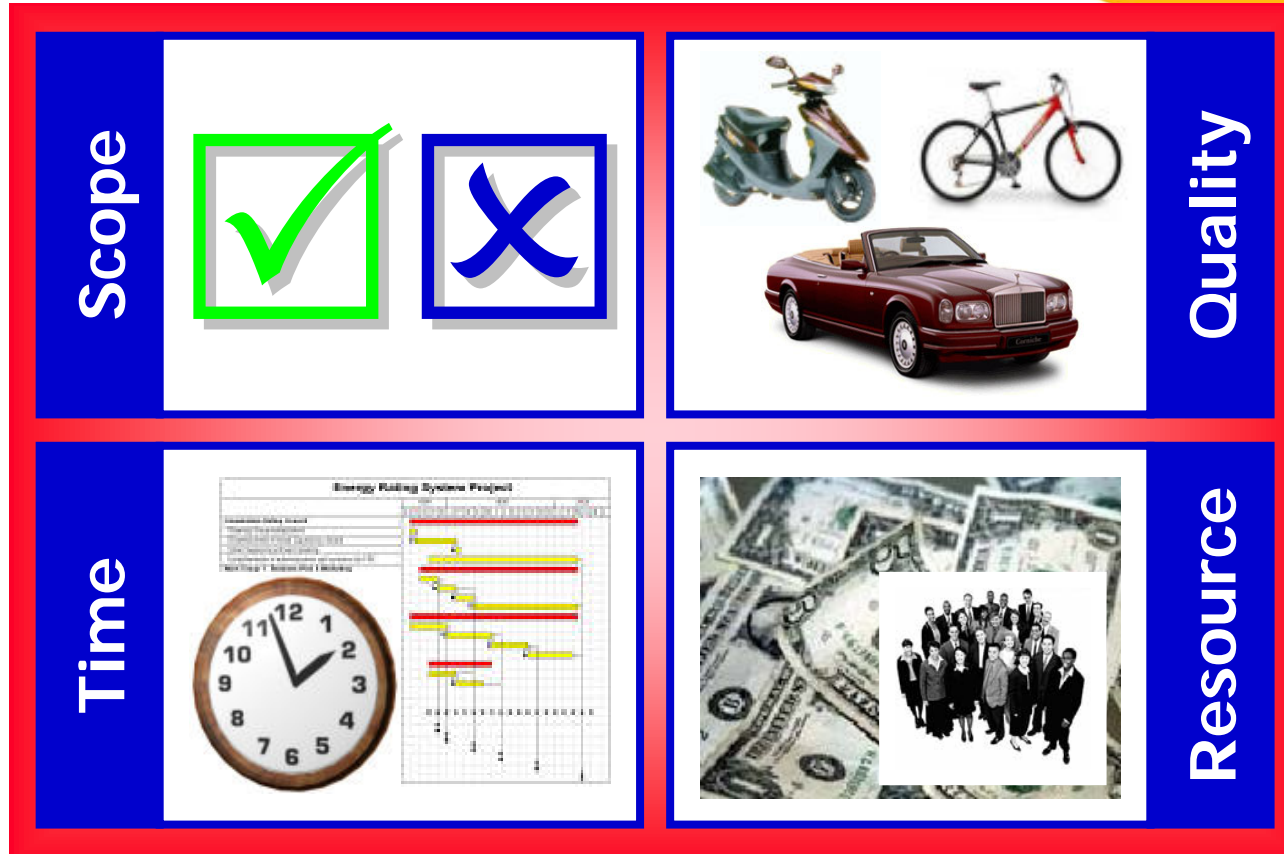
What's next?

- Documentation

- Training

- Go-live

- Post go-live support

How to Test

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If you don't know where you're going how will you get there?

How to test

- Develop your test plan

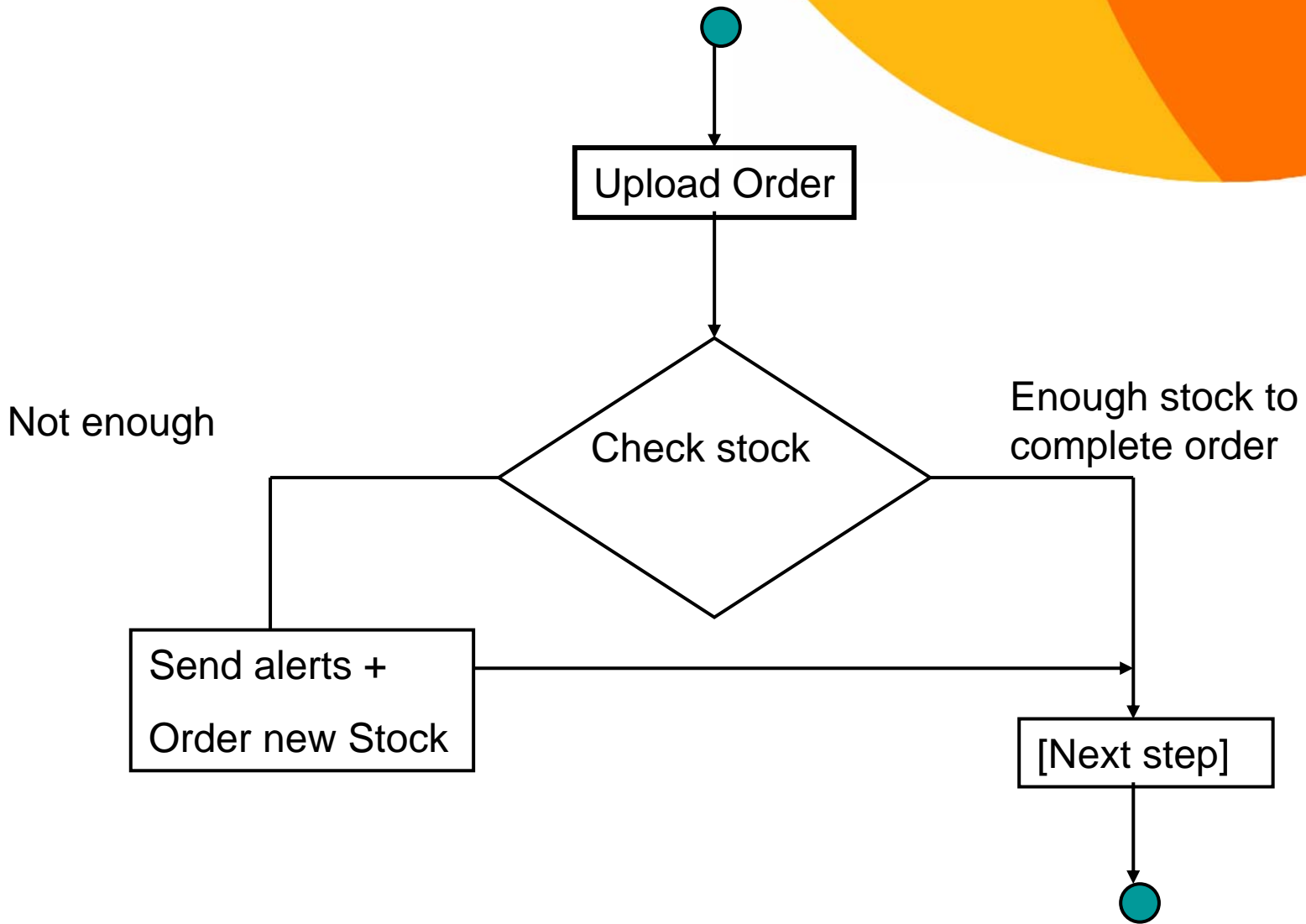- Use your UML to help then plan your tests
  (I've massively simplified mine it is your course work after all ☺)

- What is CRITICAL, what is not critical

- What are your success criteria?

Upload Order

Not enough

Check stock

Enough stock to complete order

Send alerts +

Order new Stock

[Next step]

Test Plans

Test	Method Required	Owner	Desired outcome	Actual Outcome	Date	Further Action
Upload Order						
Can open file	XXX	XXX	XXX	XXX	XXX	XXX
Create Order						
Item is instock	checkStock(item, quantity, DC)	Stuart (Ordering team)	True is returned by checkStock method	True	4/11/08	none
Item is out of stock	checkStock(item, quantity, DC)	Stuart (Ordering team)	False is returned by checkStock	True	4/11/08	Investigate checkStock
Sending stock alerts	sendAlert(DC,order)	Pete (DC team)	"Message sent" returned by method	"message sent"	4/11/08	
Arrange collection						
XXX	XXX	XXX	XXX	XXX	XXX	XXX

Tracking & Success Criteria

- When testing, how do you know...
  - what still needs to be fixed?
  - if you are on track to deliver a complete solution on-time?

- Answer:
  - A **single** issue tracking system for **everyone** throughout the **whole project**.
    - Should contain: Issue description, impact, owner, status
  - Set **success criteria** for each phase of the project.
    - % of minor issues still open
    - % of critical issues still open

Key tips

- Set clear success criteria <u>before</u> you start testing
  - What can you simply not go-live without?

- Don't underestimate time needed to resolve issues
  - Test everything
  - Fix issues
  - Test fixes
  - Fix issues caused by previous fixes
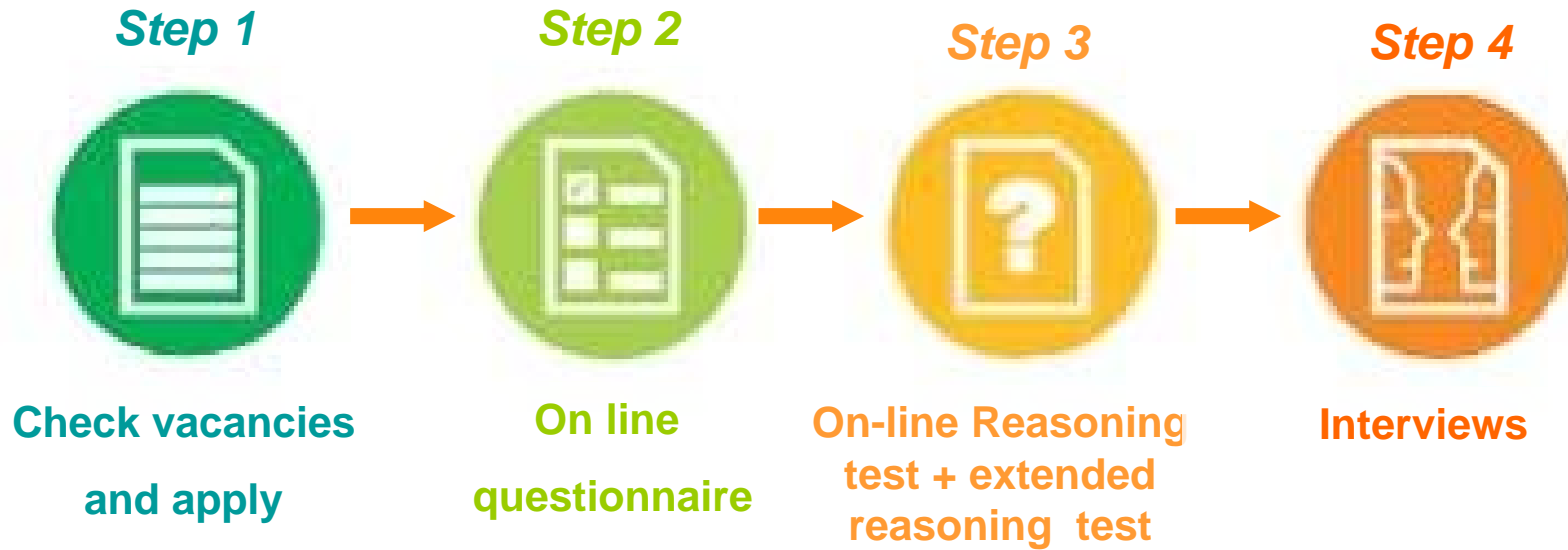 - Re-test fixes

Thank you!

Questions?

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Step 1

Step 2

Step 3

Step 4

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On-line Reasoning test + extended reasoning test

Interviews

www**PG**careers.com