

AGILE REQUIREMENTS

AKBAR ZAMIR, PRINCIPAL CONSULTANT



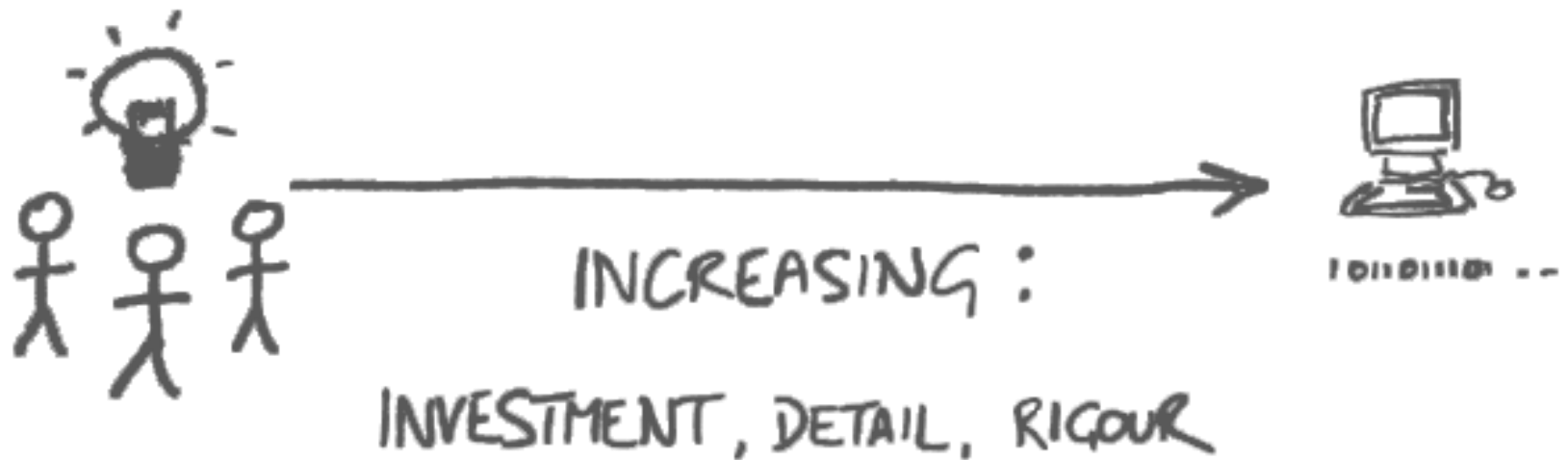
IN THE RED CORNER ...



IN THE BLUE CORNER ...

... “NO DOCUMENTATION —
WE CUT STRAIGHT TO
THE CODE, DUDE !!”

FROM CONCEPT TO CODE



WHAT IS REQUIREMENTS WORK?

↘ ANALYSIS

- ↘ Understand stakeholder needs
- ↘ Define the problem and domain clearly
- ↘ Address problem complexity through decomposition
- ↘ Help ensure the solution is relevant

↘ SPECIFICATION

- ↘ Describe behaviour required of the solution
- ↘ Help the developer do his job efficiently



COLLABORATIVE OR CONTRACTUAL?

**“LET’S FIGURE OUT TOGETHER THE
BEST WAY TO MEET YOUR GOALS”**

**“TELL US PRECISELY WHAT
YOU WANT US TO BUILD”**

THE PROBLEM WITH REQUIREMENTS ...

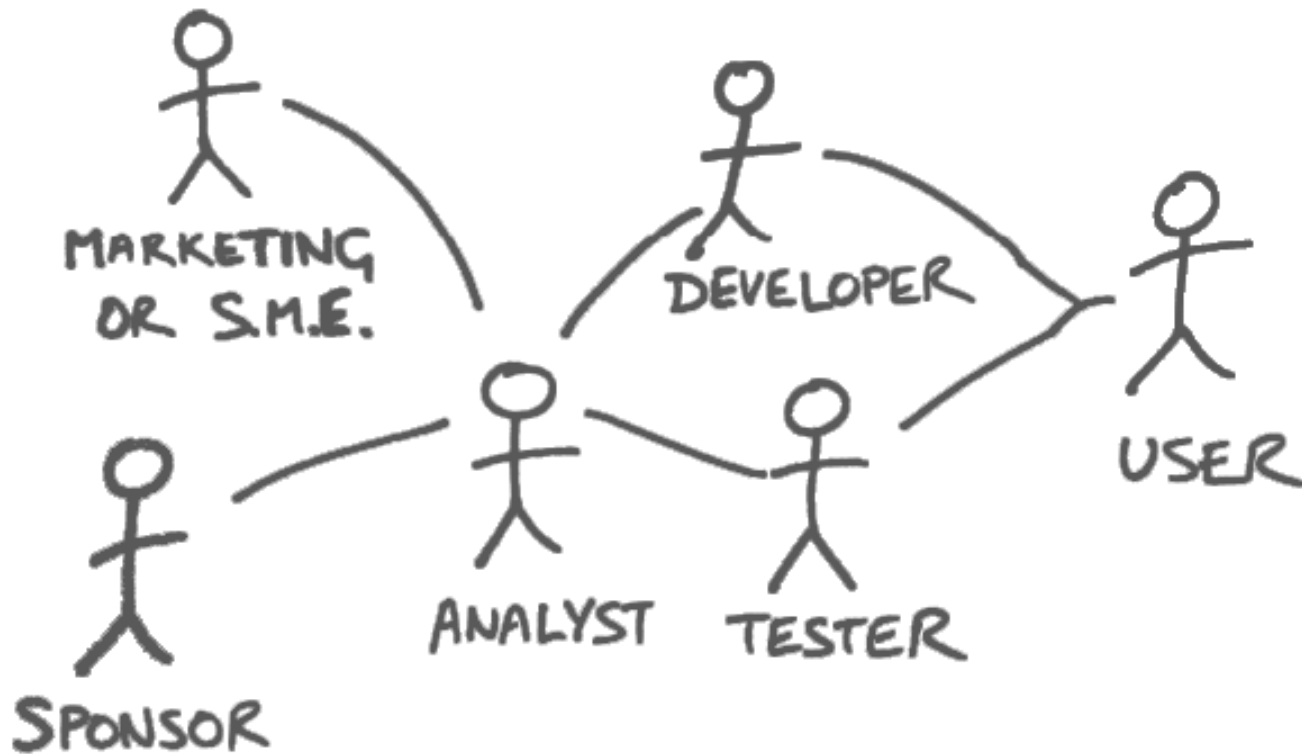
... MOST OF THEM
AREN'T

COMMON DIFFICULTIES WITH REQUIREMENTS

- ⌵ DIFFICULT TO VISUALISE EVERYTHING UP FRONT
- ⌵ DON'T ALWAYS BEGIN KNOWING PRECISELY WHAT I WANT
- ⌵ HOW TO STRUCTURE FOR EASE OF FREQUENT ACCESS?
- ⌵ EVERY REQUIREMENT INCURS A COST
- ⌵ THAT COST IS TYPICALLY NOT KNOWN WITH GREAT ACCURACY IN ADVANCE
- ⌵ COST ISN'T NECESSARILY FIXED
- ⌵ PREMATURE SPECIFICATION PRECLUDES COST OPTIONS



INFORMATION LEACKAGE



AGILE REQUIREMENT PRINCIPLES

- FOCUS ON THE GOALS OF THE PROJECT
- BRING MULTIPLE PERSPECTIVES TOGETHER
- DO NOT COMMIT TO DETAILS UNTIL NECESSARY



A high-angle, close-up photograph of a golf green. The grass is a vibrant green and appears to be a well-maintained turf. In the lower right quadrant, a circular hole is visible, surrounded by a light-colored concrete or stone border. A white golf ball, featuring a black Nike swoosh and some text, is positioned just inside the hole. A white flagstick is partially visible, extending from the hole towards the left. A dark grey semi-transparent banner is overlaid across the middle of the image, containing the word 'GOALS' on the left and the 'valtech' logo on the right.

GOALS



GOALS

- ↘ WHY IS THIS PROJECT BEING FUNDED?
- ↘ REVENUE GENERATION
- ↘ COST REDUCTION
 - ↘ INTERNAL COSTS
 - ↘ COST OF OWNERSHIP (REALISED BY CUSTOMER)
- ↘ MARKET SHARE RETENTION
- ↘ INCREASE THE SUM OF HUMAN HAPPINESS



ONLINE BOOK STORE: PROJECT GOALS

➤ CONVENIENCE FOR CONSUMERS

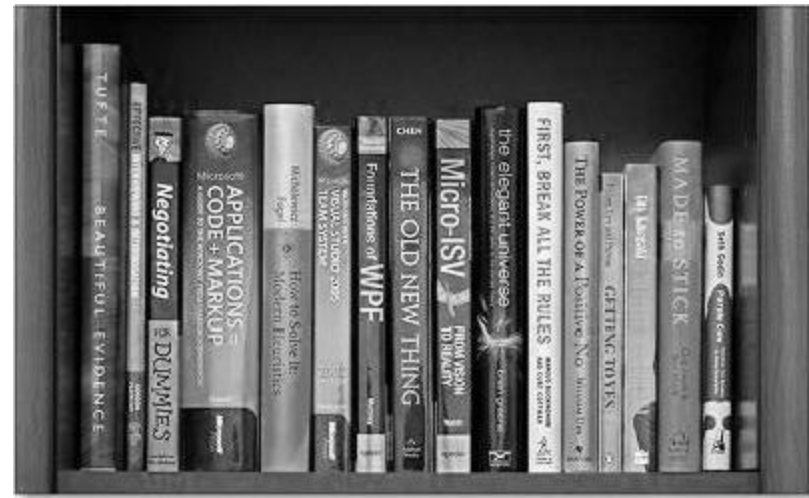
- INFORMATION NEEDED TO MAKE A PURCHASE DECISION
- SPEED AND FLEXIBILITY OF DELIVERY (DETERMINE WHERE AND WHEN)
- WIDE RANGE – EVERYTHING ‘UNDER ONE ROOF’
- EASE OF BROWSING / FINDING

➤ COMPETITIVE PRICING

- AGAINST CONVENTIONAL BOOK STORES

➤ EFFICIENT SUPPLY CHAIN MANAGEMENT

➤ LOW SITE OPERATIONAL COST



ONLINE BOOK STORE: RELEASE MAP

↘ RELEASE 1: ENTER THE MARKET

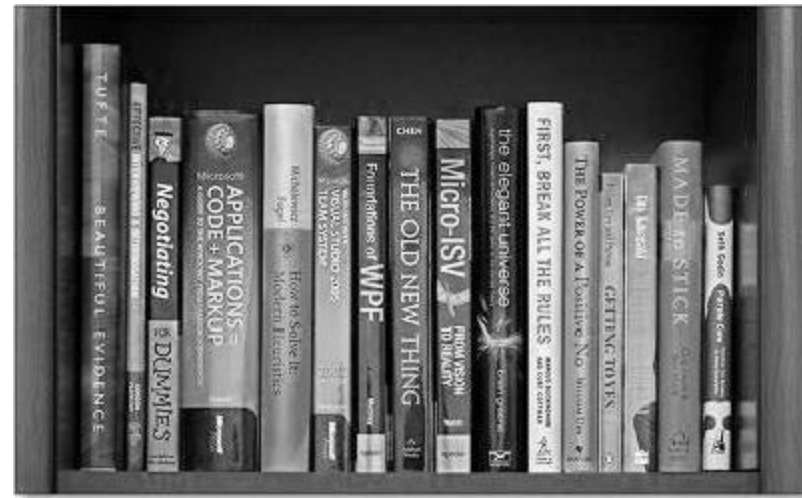
- ↘ COMPUTING TITLES
- ↘ SINGLE ITEM PURCHASE

↘ RELEASE 2: INCREASE CUSTOMER BASE

- ↘ ALL CATEGORIES
- ↘ POWERFUL SEARCH
- ↘ SHOPPING CART

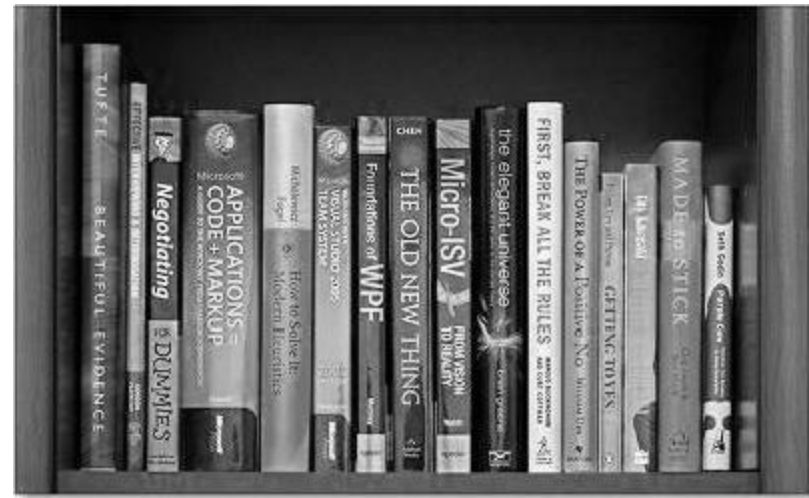
↘ RELEASE 3: INCREASE REVENUE PER VISIT, CUSTOMER LOYALTY

- ↘ RECOMMENDATIONS
- ↘ FLEXIBLE DELIVERY OPTIONS



ONLINE BOOK STORE: USE CASES


- ✓ CUSTOMER SEARCHES FOR TITLE
 - ✓ CUSTOMER BROWSES TITLES
 - ✓ CUSTOMER MAKES PURCHASE
 - ✓ CUSTOMER PLACES ADVANCE ORDER
-
- ✓ MERCHANT PRESENTS RECOMMENDATIONS
-
- ✓ WAREHOUSE WORKER REVIEWS
AGGREGATE ORDERS



**THE MOST
IMPORTANT
QUESTION TO ASK ...

WHY?**

USER STORY

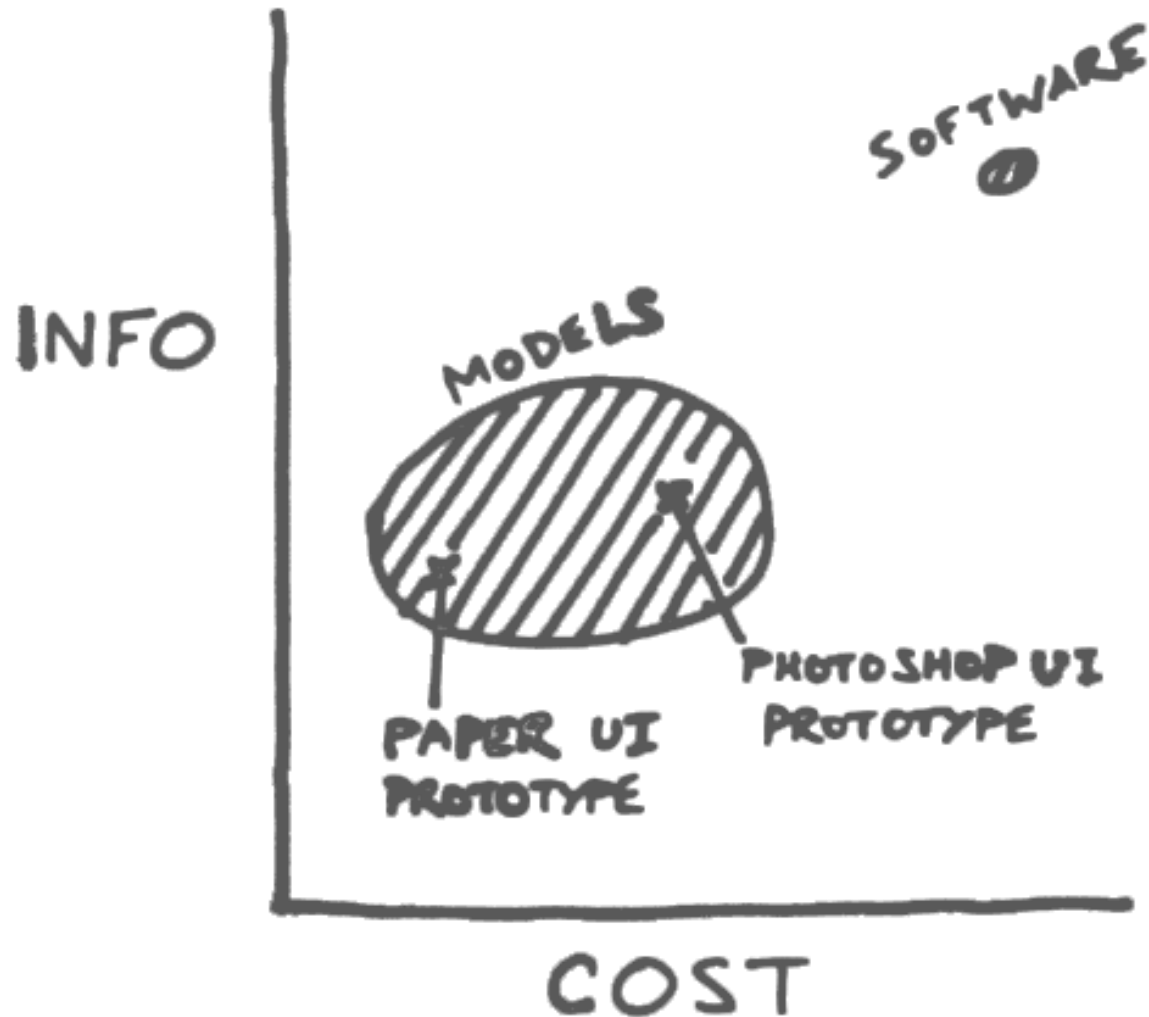


AS A CUSTOMER, I WANT
TO SEARCH FOR A TITLE
SO THAT I CAN BUY IT

USER STORY

IN ORDER TO MAKE A
PURCHASING DECISION,
AS A CUSTOMER I WANT
TO SEE DETAILS FOR A
GIVEN TITLE

ONLY INDEX CARDS?!

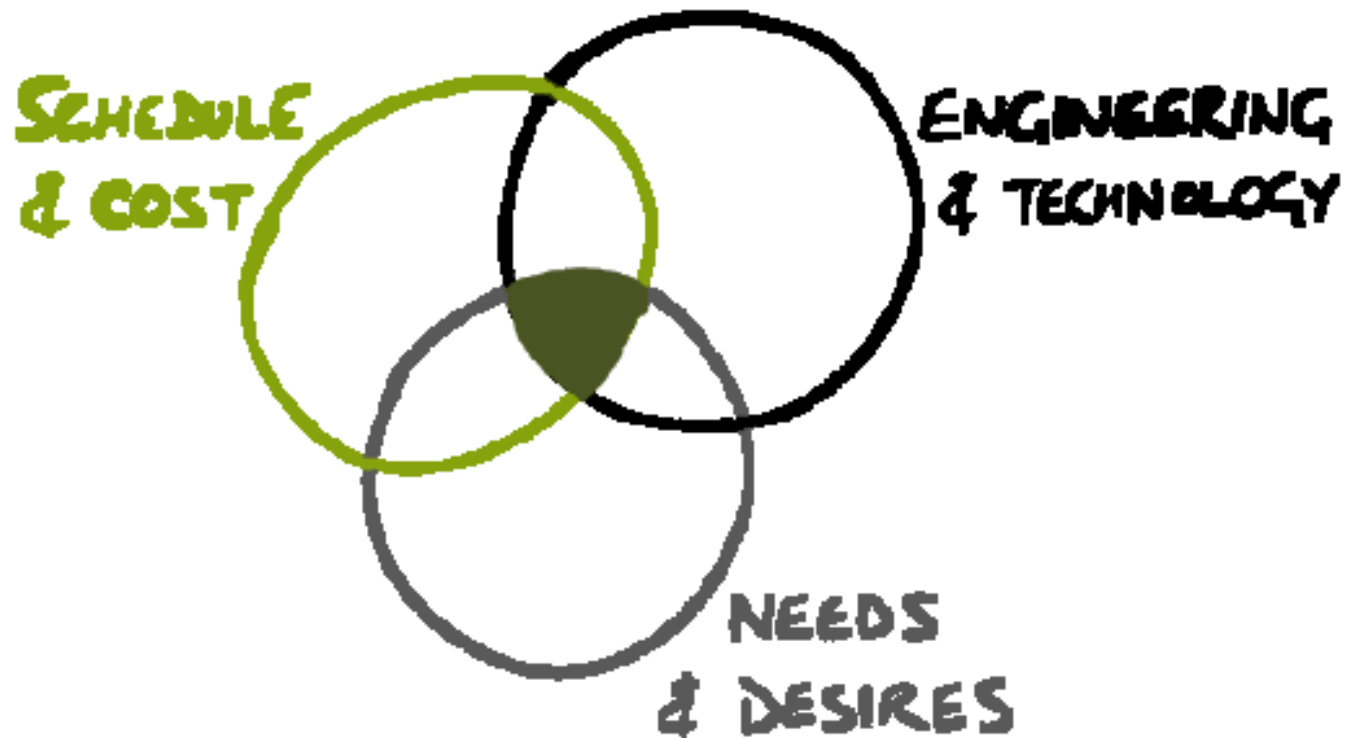


AS THE TIME TO IMPLEMENT APPROACHES ...

- EXAMINE ALTERNATIVE MEANS FOR ACHIEVING THE STORY GOAL
- IDENTIFY THE OPTIMUM SOLUTION
- SPECIFY PRECISELY THE REQUIRED FEATURE BEHAVIOUR



WHO IS INVOLVED?



OPTIONS AND COST

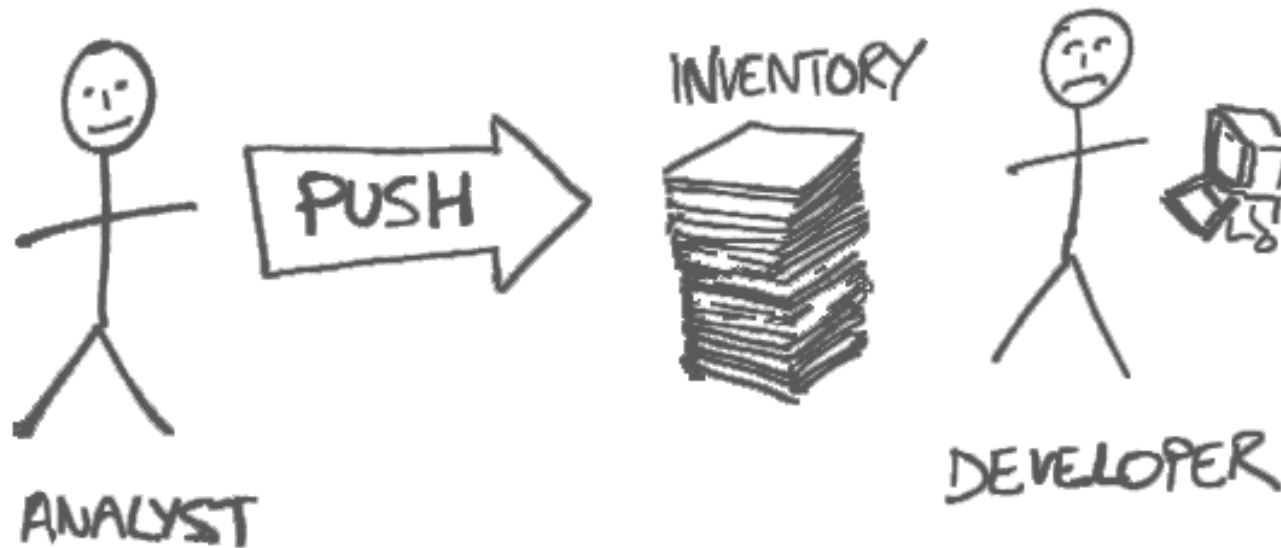
↘ KEYWORD SEARCH WITH MULTIPLE MATCHES RETURNED ...

↘ IN WHICH ORDER SHOULD MATCHES
CONSUMER?

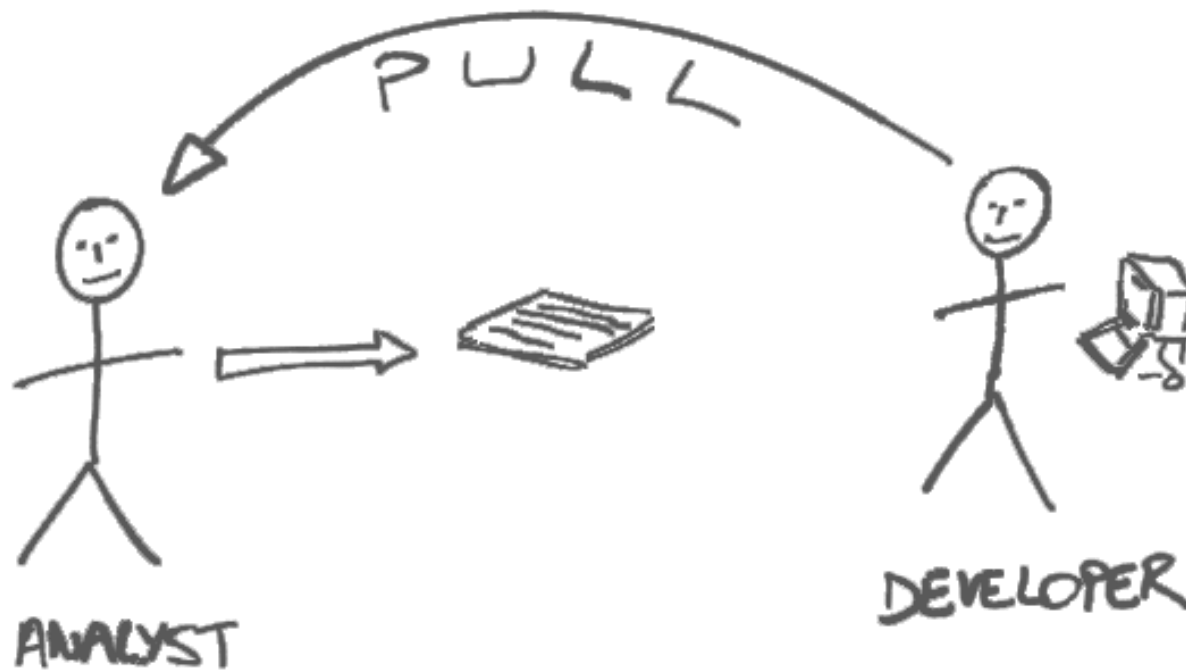
- ↘ BY PUBLICATION DATE
- ↘ ALPHABETICALLY BY TITLE
- ↘ ALPHABETICALLY BY AUTHOR NAME
- ↘ ARBITRARILY
- ↘ BY RELEVANCE



PRODUCTION TO FORECAST



PRODUCTION TO ORDER



WHICH STORY NEXT?

- PREFER HIGHER VALUE STORIES FIRST
- PREFER TECHNICALLY RISKIER STORIES FIRST
- PREFER LESS VOLATILE STORIES FIRST



SOME ARE MORE EQUAL THAN OTHERS ...

- ↘ WHAT IS CURRENTLY THE MOST IMPORTANT CAPABILITY MISSING FROM THE PRODUCT?
- ↘ TWO DIMENSIONAL APPROACH:
 - ↘ A PREMIUM PLACED ON IMPLEMENTATION OF THE FEATURE
 - ↘ A PENALTY INVOKED BY THE ABSENCE OF THE FEATURE
- ↘ MULTIPLE STAKEHOLDERS:
 - ↘ VOTING FOR PRIORITY
 - ↘ REFER BACK TO PROJECT GOALS



INTERACTIVE SPECIFICATION

SEARCH FOR TITLE

- ↘ BY ISBN → SUPPORT 13 AND 10 DIGIT FORMATS?
- ↘ BY KEYWORD → ALLOW PHRASES?
- ↘ HOW TO DISPLAY
 - ↘ NO MATCHES
 - ↘ MORE THAN ONE MATCH → RANKING CRITERIA?
 - ↘ ONE MATCH → AUTHOR, NUMBER OF PAGES, PRICE, NUMBER IN STOCK ...
- ↘ HOW QUICKLY?
- ↘ HOW MANY TITLES HELD? THOUSANDS? TENS OF MILLIONS?
- ↘ WHAT HAPPENS IF DIFFERENT EDITIONS OF THE SAME TITLE ARE IN STOCK?



EXECUTABLE SPECIFICATION



TEST

EDIT

PROPERTIES

REFACTOR

USER GUIDE

ValtechTests

TEST RESULTS

Assertions: 15 right, 1 wrong, 0 ignored, 0 exceptions

Contents:

classpath: D:\projects\Fitness\bin

com.CalculatorFixture					
a	b	sum?	subtract?	multiply?	divide?
10	2	12	8	20	5
12	3	15	9	36	4
100	4	104	96	400	25
5	1	6	4	5	1 expected 5 actual

SMALL INCREMENTS OF VALUE

Find by ISBN-13, display author and title only
Display publisher, page count, year of publication, price, cover image
Display number in stock
Consumer-friendly message if not found
Support ISBN-10



EPIC: BOOK RECOMMENDATIONS



└ WHY?

- └ TO STIMULATE DEMAND, BY ENCOURAGING MORE PURCHASES PER VISIT

└ HOW?

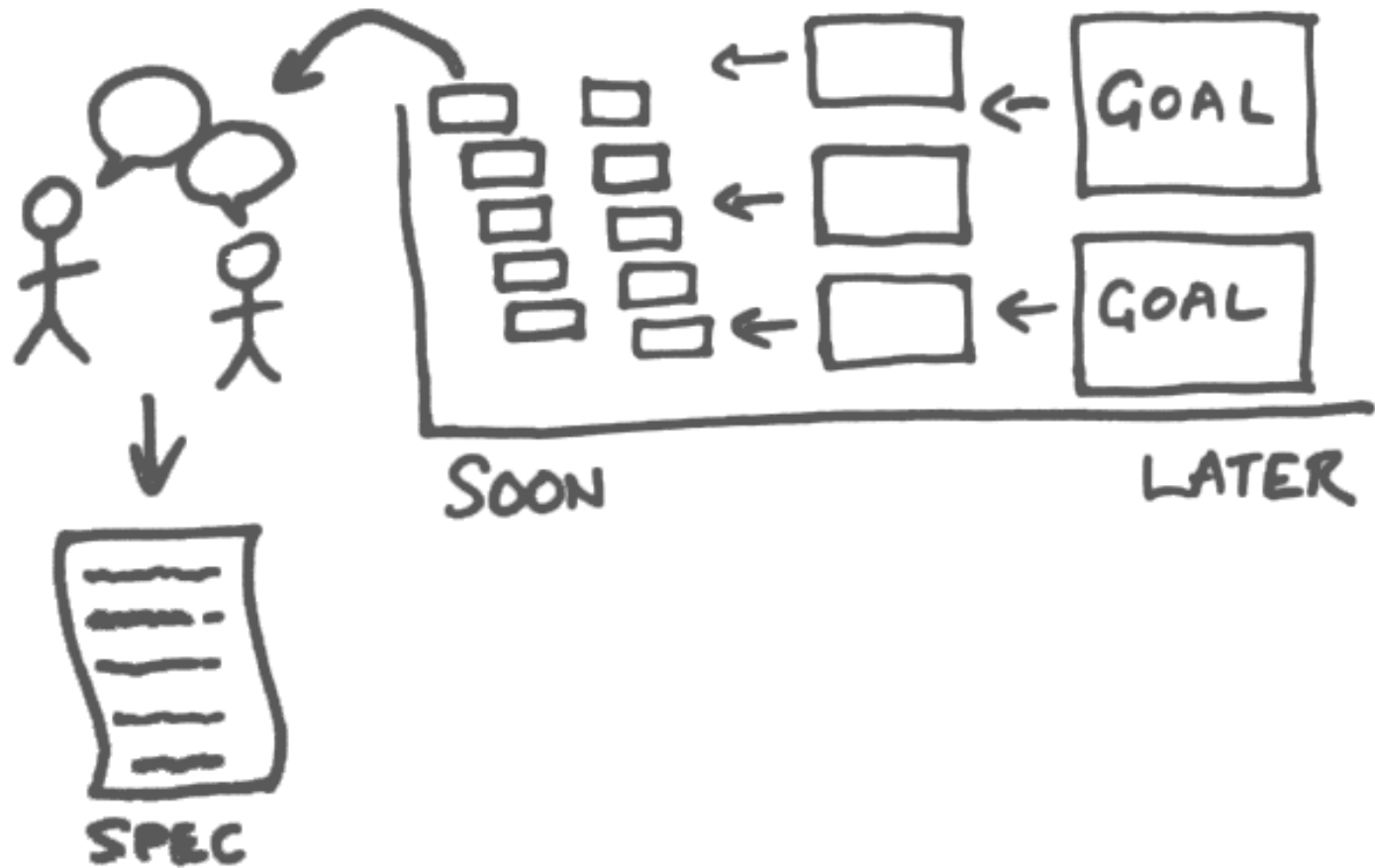
- └ EDITOR'S CHOICE ON EVERYONE'S HOME PAGE
- └ PERSONALISED HOME PAGE, BASED ON PURCHASE HISTORY AND BOOKS BY
 - └ SAME AUTHORS
 - └ COLLABORATIVE FILTERING AGAINST SELECTED TITLE
 - └ INCLUDE CUSTOMER RATINGS



OUR APPROACH



OUR APPROACH



CULTURE WARS REVISITED

Traditional	VS.	Agile
✚ Requirements		✚ Goals
✚ Audit focused		✚ Value focused
✚ Handed down		✚ Collaborative
✚ 'Completed' up front		✚ Incremental

IT'S *THAT* SLIDE AGAIN ...

INDIVIDUALS AND INTERACTIONS OVER PROCESSES AND TOOLS

WORKING SOFTWARE OVER COMPREHENSIVE DOCUMENTATION

CUSTOMER COLLABORATION OVER CONTRACT NEGOTIATION

RESPONDING TO CHANGE OVER FOLLOWING A PLAN



ANY QUESTIONS ...

Contact us!



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