

BOLSTERING SERVICE DELIVERY SUCCESS WITH AGILE-DRIVEN RISK MANAGEMENT

WARNING: THIS IS A BULLET-FREE ZONE. IF THE ABSENCE OF BULLETS IN A PRESENTATION MAKES YOU FEEL UNCOMFORTABLE, YOU SHOULD LEAVE THE ROOM **NOW**. GUNS DON'T KILL PEOPLE...BULLETS DO.



PRESENTED BY:
William J Robinson
wjrobin@sandia.gov
PRINCIPAL SOLUTIONS ARCHITECT

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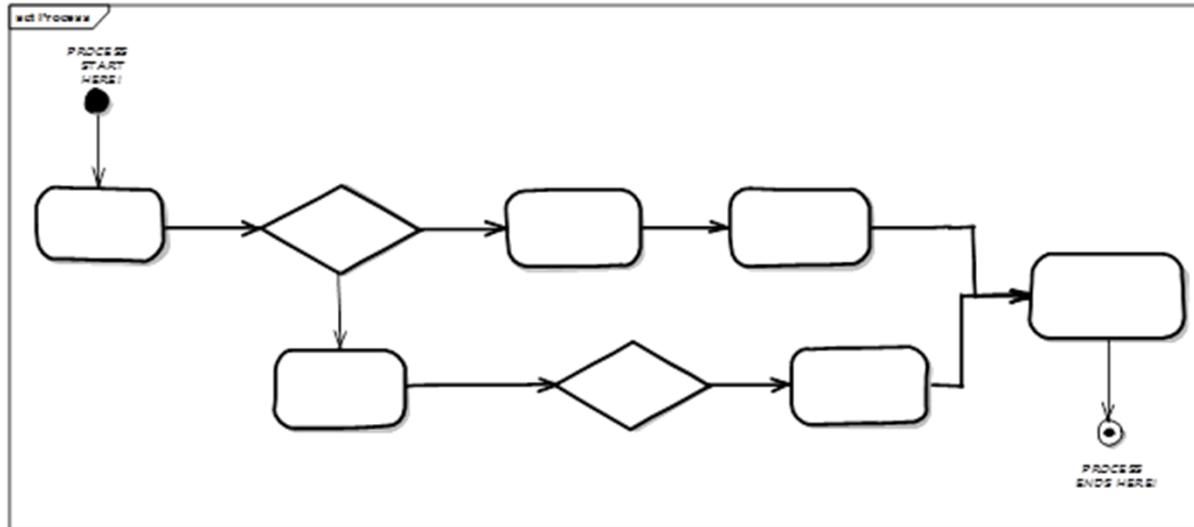
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{ **PROCESS**: A SERIES OF ACTIONS THAT PRODUCES SOMETHING OR THAT LEAD TO A PARTICULAR RESULT. }



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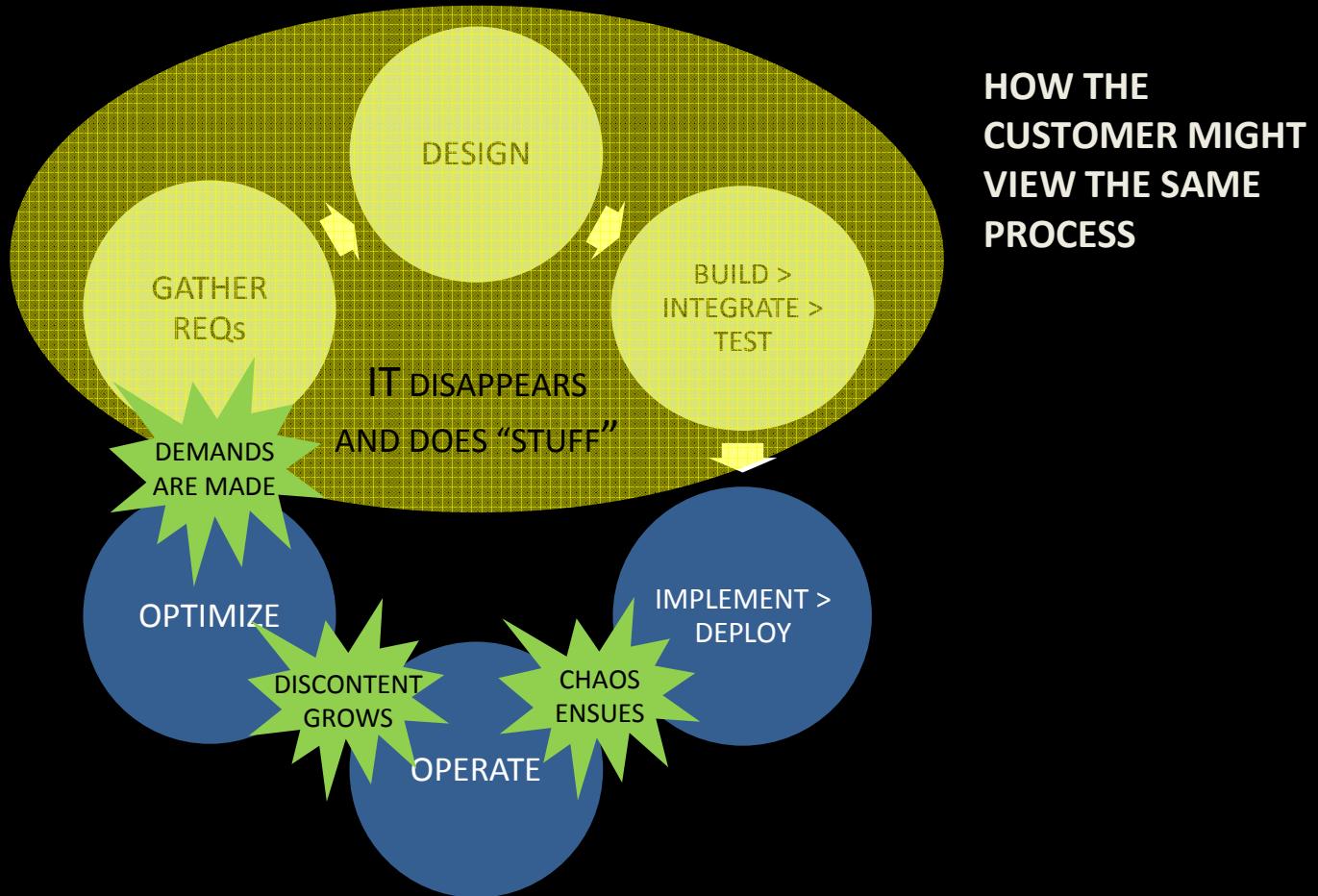


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Service Transition >

Building and deploying of new or modified IT services, Including applications.



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THE GOOD NEWS?

**YOUR CUSTOMERS REALLY DON'T CARE ABOUT YOUR
PROCESS...BUT THEY DO CARE ABOUT VALUE.**

**"IN ORDER TO ATTRACT NEW CUSTOMERS AND KEEP THE
EXISTING CUSTOMERS SATISFIED IT IS NECESSARY TO CREATE
VALUE. VALUE IS CREATED BY GETTING **THE BALANCE**
CORRECT BETWEEN WHAT THE CUSTOMER RECEIVES AND
HOW MUCH IT WILL COST."**

[HTTP://BUSINESSCASESTUDIES.CO.UK/STANDARD-LIFE/CUSTOMERS-PROCESS-AND-
PEOPLE/INTRODUCTION.HTML](http://BUSINESSCASESTUDIES.CO.UK/STANDARD-LIFE/CUSTOMERS-PROCESS-AND-PEOPLE/INTRODUCTION.HTML)



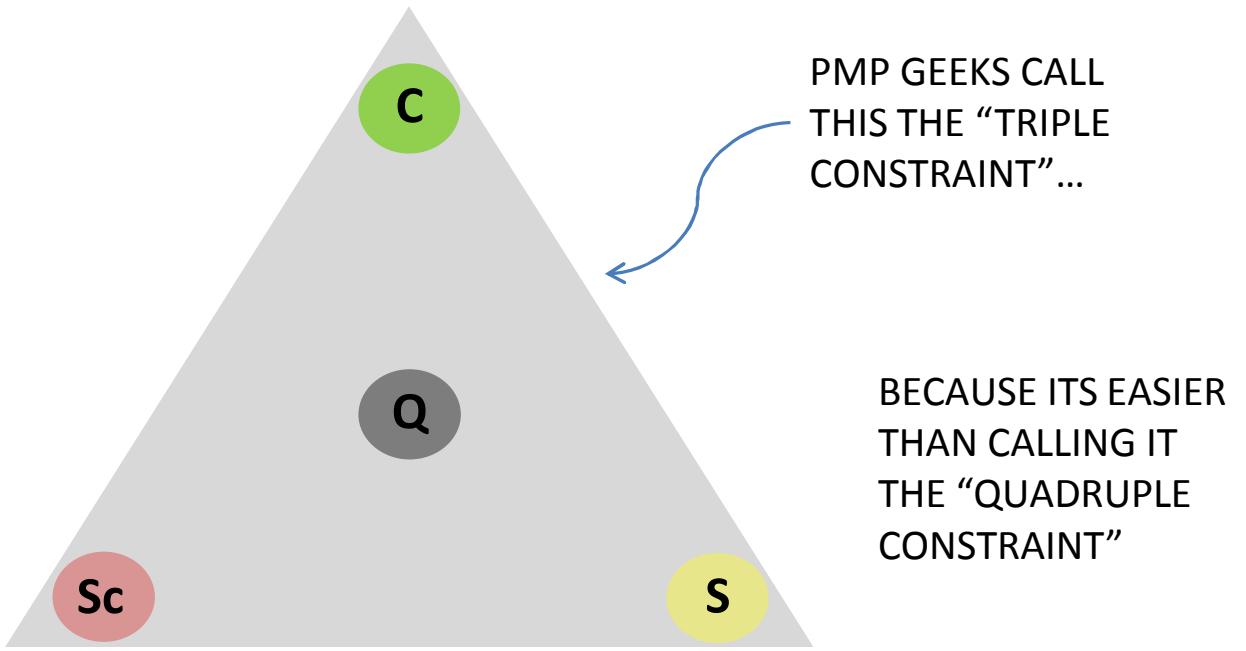
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CUSTOMERS REALLY CARE ABOUT...



BUT WE WILL REFER TO THESE AS CUSTOMER-BASED RISKS...



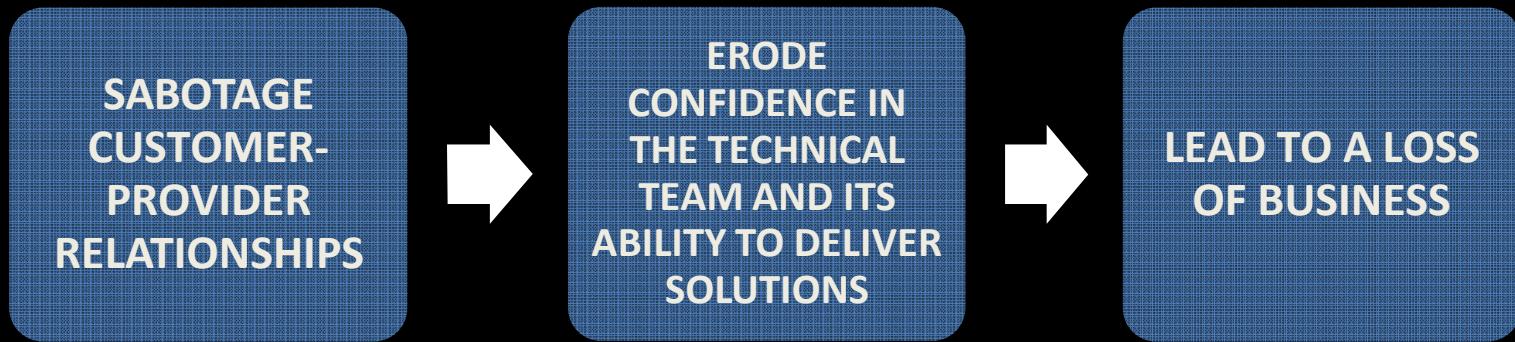
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A FAILURE TO ADDRESS CUSTOMER-BASED RISKS CAN...



“Profit in business comes from repeat customers, customers that boast about your project or service, and that bring friends with them.”

W. Edwards Deming



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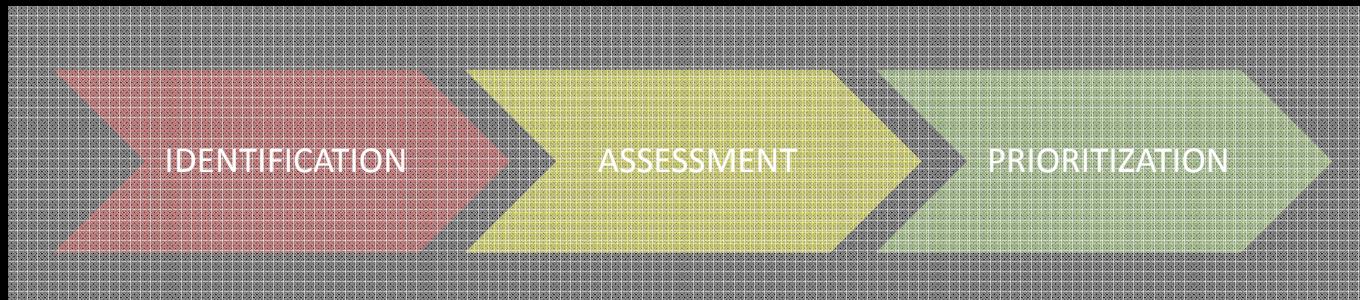
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QUESTION:

HOW DO MOST IT ORGANIZATIONS APPROACH THE MANAGEMENT OF CUSTOMER-BASED RISKS?

ANSWER: THROUGH THE USE OF A RISK MANAGEMENT STRUCTURE, INCLUDING METHODS, PROCESSES, PLANS, ETC.



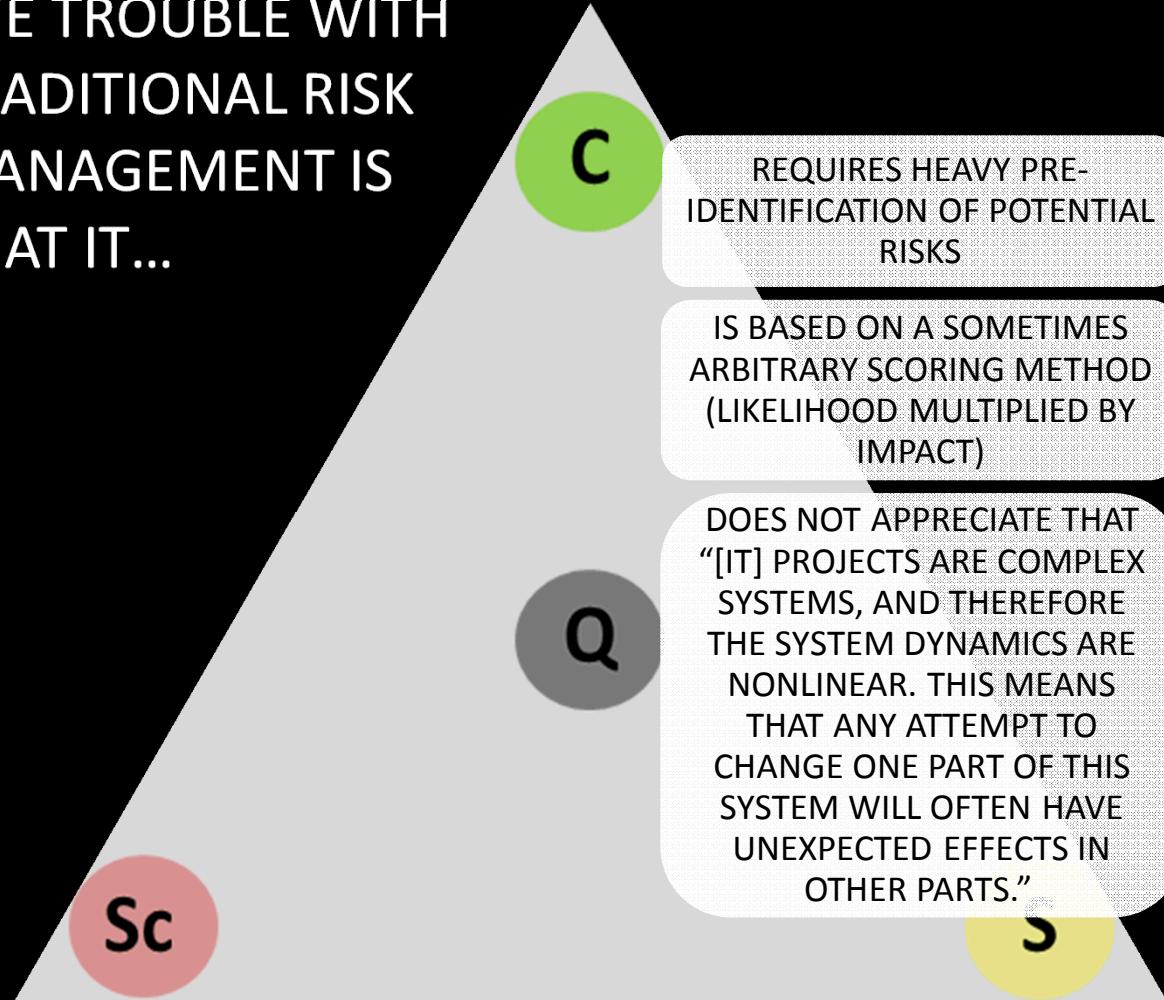
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THE TROUBLE WITH TRADITIONAL RISK MANAGEMENT IS THAT IT...



A “FILL-IN-THE-TEMPLATE” EXERCISE

A GROSS OVER-SIMPLIFICATION OF THE PROJECT OR SYSTEM THROUGH THE USE OF A SOMETIMES ARCANE METHOD

<http://www.noop.nl/2008/03/traditional-ris.html>



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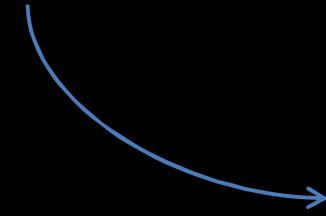
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REALITY CHECK...

SUCCESS RATES FOR AGILE PROJECTS
ARE 72%; SUCCESS RATES FOR
TRADITIONAL APPROACHES ...63%.

DR DOBBS JOURNAL (2007 – 2011)



QUESTION: IF TRADITIONAL PROJECT
MANAGEMENT INCLUDES FORMAL RISK
MANAGEMENT AND...YET...THESE EFFORTS
STILL PERFORM BELOW AGILE-BASED PROJECTS
THEN...**WHAT'S THE POINT?**



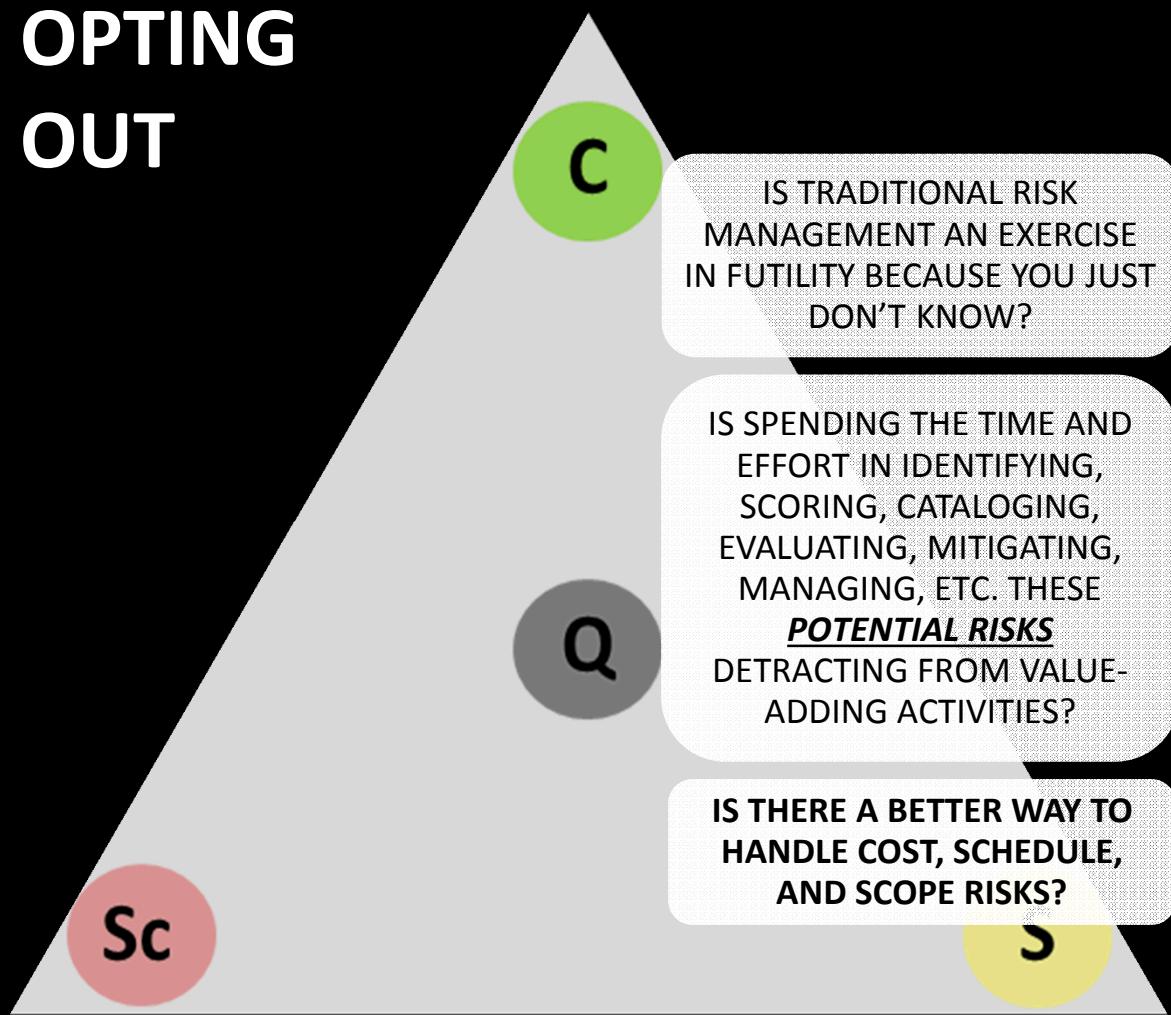
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OPTING OUT



“THE MOST IMPORTANT THINGS ARE UNKNOWN AND UNKNOWABLE.”
W. Edwards Deming

AGILE METHODS MIGHT PROVIDE THE BEST ALTERNATIVE...



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AGILE METHODS FOR RISK MITIGATION

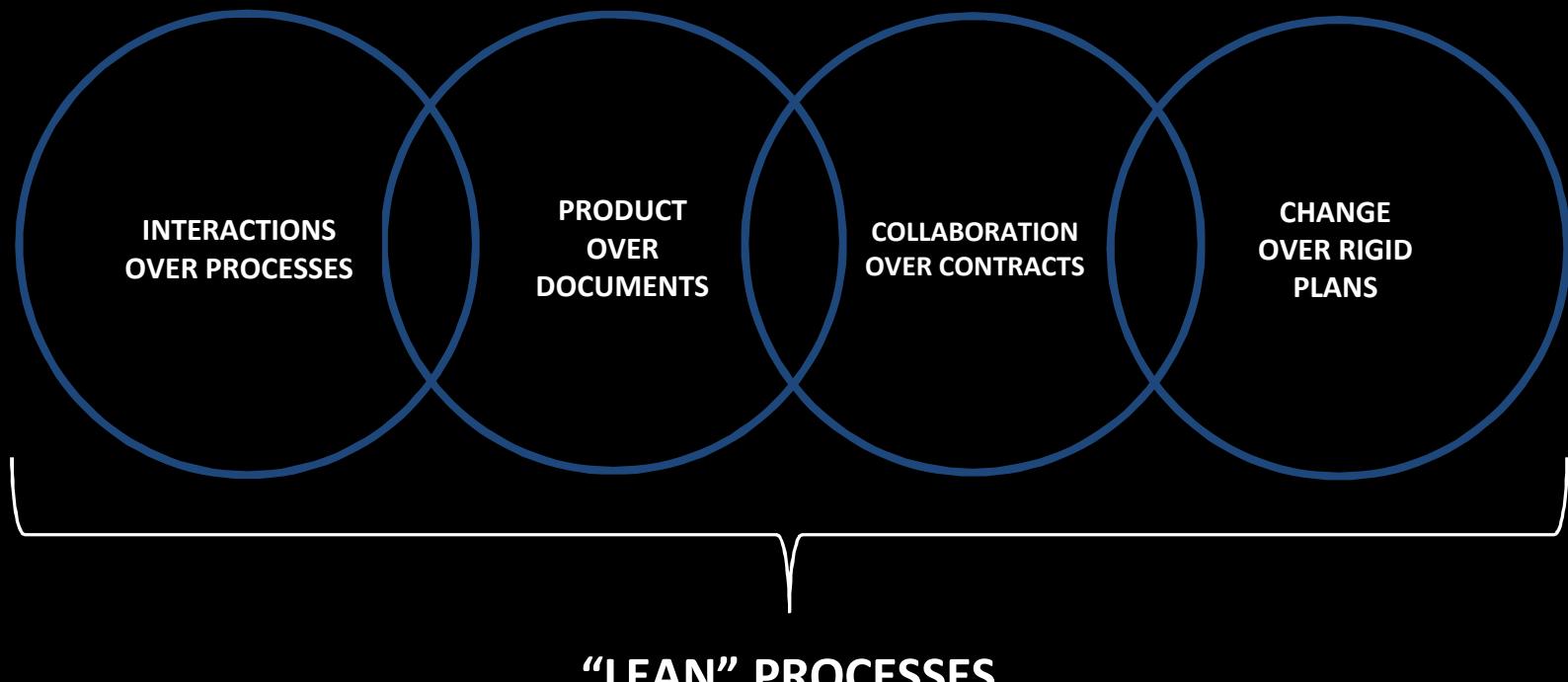
THIS PRESENTATION WILL ATTEMPT TO CONVINCE ATTENDEES THAT TRADITIONAL RISK MANAGEMENT METHODS ARE NON-VALUE-ADDING ACTIVITIES THAT CANNOT AND DO NOT ENSURE PROJECT SUCCESS.

THE SUGGESTED APPROACH CENTERS ON MORE EFFECTIVE MANAGEMENT AND CONTROL OF THE TRIPLE CONSTRAINT (I.E. THE PRIMARY CUSTOMER RISKS) THROUGH THE USE OF ***AGILE-BASED METHODS***.

- S** SCRUM (OR ITERATIVE PLANNING METHODS) FOR ENHANCED AND “JUST IN TIME” SCHEDULE CONTROL
- Sc** AGILE MODELING FOR PRODUCT ENVISIONING AND ENHANCED SCOPE CONTROL
- C** RAPID ESTIMATION (VIA UCP OR SIMILAR) AND KANBAN FOR ENHANCED COST CONTROL



In terms of IT systems development, Agile is a set of principles:



<http://agilemanifesto.org/>



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LEAN:

MAXIMIZES CUSTOMER VALUE AND MINIMIZES WASTE.

CREATES PROCESSES THAT NEED LESS HUMAN EFFORT,
LESS SPACE, LESS CAPITAL, AND LESS TIME TO MAKE
PRODUCTS AND SERVICES AT FAR LESS COSTS AND WITH MUCH FEWER
DEFECTS.



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SCHEDULE AS A RISK:

THE LIKELIHOOD OF FAILING TO MEET SCHEDULE PLANS AND THE EFFECT OF THAT FAILURE.

“IT IS IMPOSSIBLE TO PREDICT, WITH COMPLETE CONFIDENCE, THE LENGTH OF TIME NECESSARY TO COMPLETE AN ACTIVITY, MEET A MILESTONE, OR DELIVER A SYSTEM.”

<https://acc.dau.mil/CommunityBrowser.aspx?id=17745>



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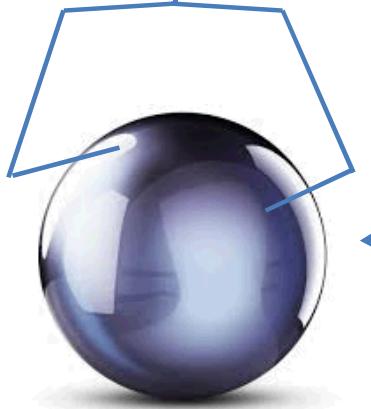


S

THIS IS "MYSTIC BOB"



I CAN SCHEDULE
4-HOUR TASKS
SIX MONTHS IN
ADVANCE...



THIS IS MYSTIC BOB's
CRYSTAL BALL

MYSTIC BOB CAN
SEE THE FUTURE...



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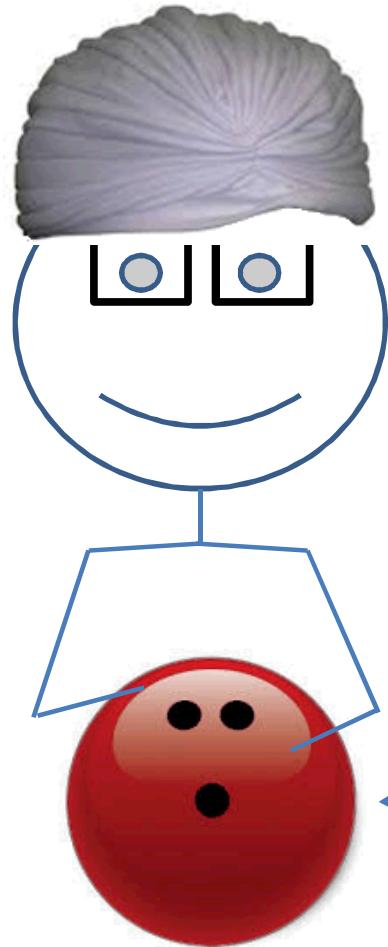
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S

FACT IS...

THIS IS REALLY JUST
PLAIN OLD "IT BOB"



AND THIS IS REALLY JUST
BOB's BOWLING
BALL...OPAQUE AND
IMPOSSIBLE TO SEE INTO...

BOB CAN'T SEE INTO
THE FUTURE...BUT HE
DOES HAVE A BOWLING
AVERAGE OF **156...**

NOT TOO SHABBY!



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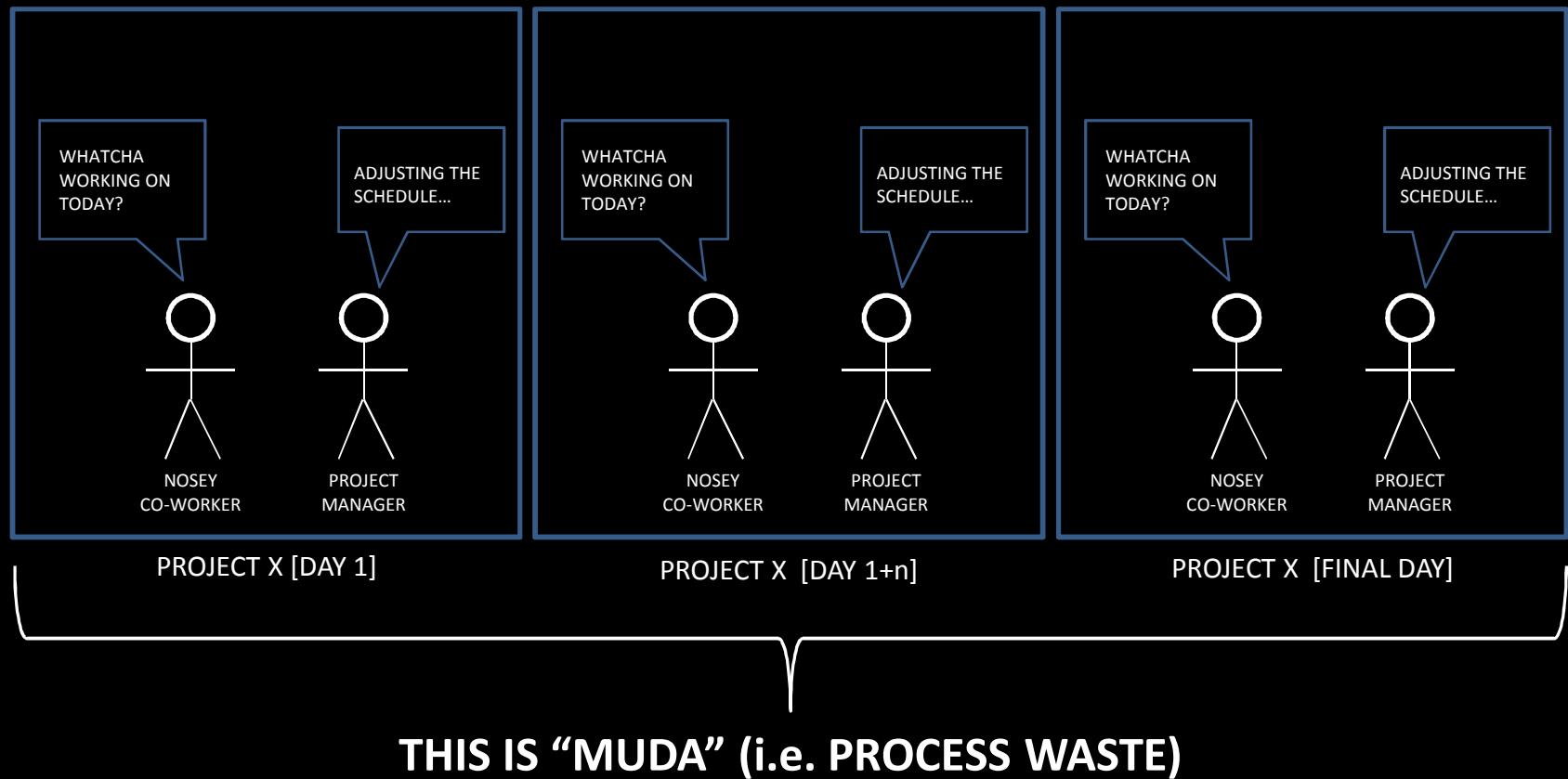


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A YEAR (OR SO) IN THE LIFE OF A PROJECT MANAGER...



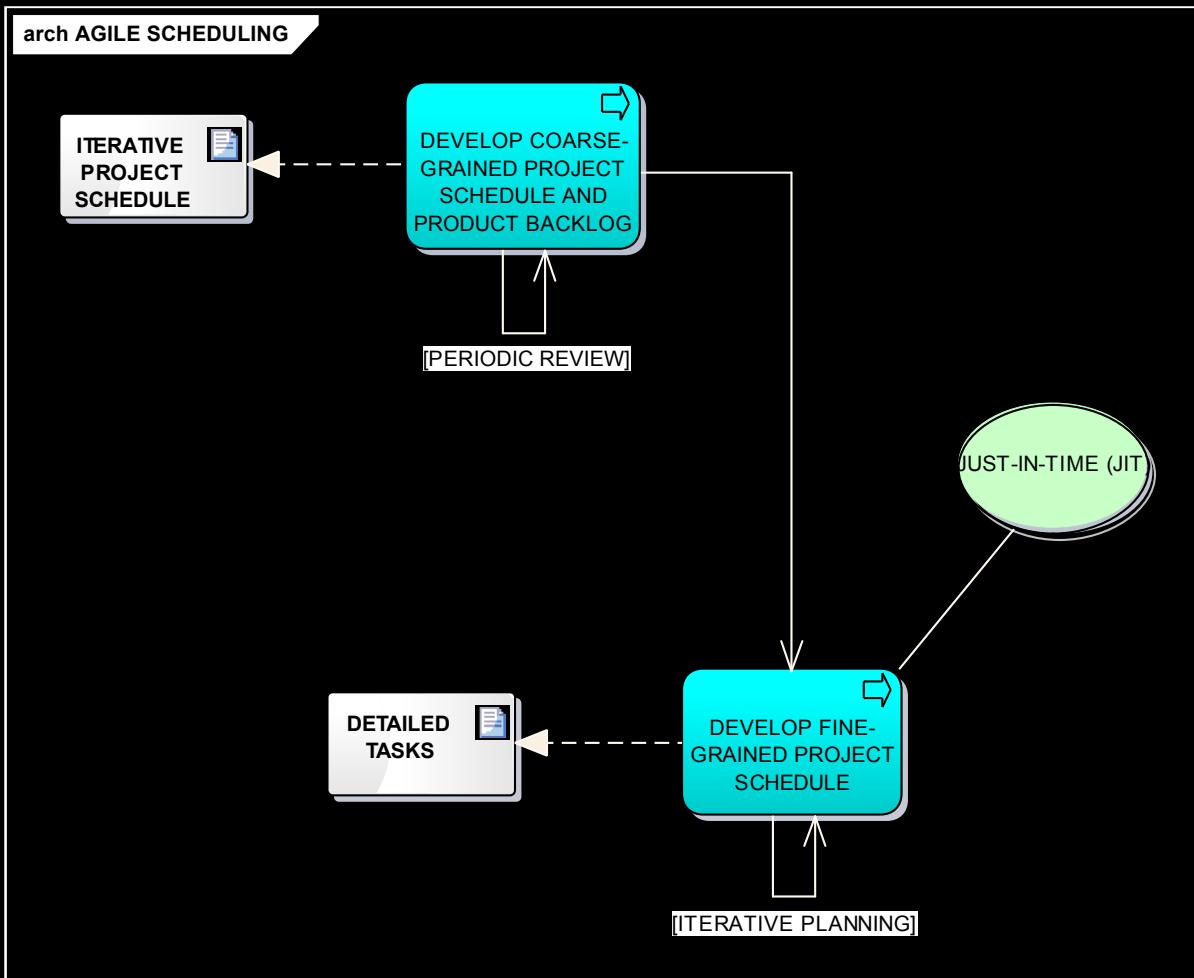
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S



THIS IS JUST-IN TIME (JIT) SCHEDULING



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Sc

SCOPE AS A RISK:

“...THE CONTINUOUS GROWTH OR CHANGE IN THE SCOPE OF A PARTICULAR PROJECT BEYOND ITS ORIGINAL STATED INTENT.”

<http://enewsletters.constructionexec.com/riskmanagement/2013/09/scope-creep-increases-risk-and-decreases-profitability/>

“EVERY FAILING PROJECT I'VE SEEN HAS HAD AN INFORMAL SCOPE OF "THE SUN, THE MOON, THE SKY AND THE STARS." IN OTHER WORDS, MANAGEMENT AND THE END USERS ARE CONVINCED THAT THEY MUST HAVE AND WILL RECEIVE THE PERFECT SOLUTION RIGHT OUT OF THE GATE. THEY NEVER GET TO THE GATE...”

http://www.agilespec.com/Key_Practices/Scope_and_risk_management.htm



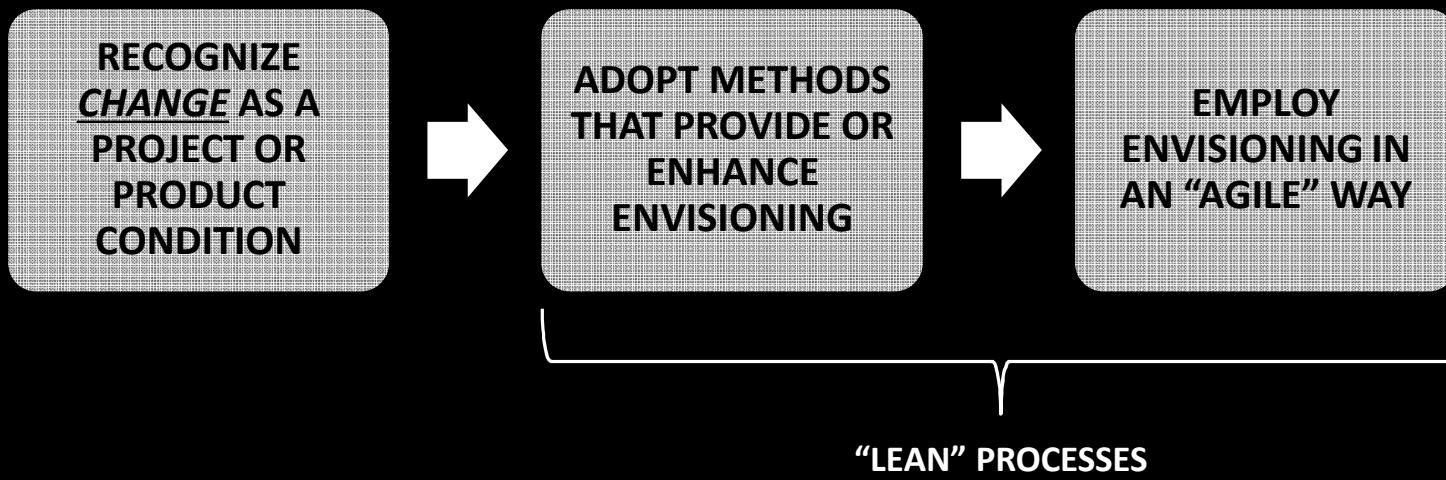
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SCOPE CREEP DOES NOT HAVE TO BE A PROJECT OR PRODUCT CONDITION...RATHER...



"...TOO OFTEN A COMPLEX PROJECT IS UNDERTAKEN WITHOUT CLEAR GOALS AND DIRECTION. THESE "MINOR" DETAILS ARE HAPLESSLY LEFT TO SORT THEMSELVES OUT ONCE THE PROJECT IS UNDERWAY."

http://www.imsi-pm.com/home/library/scope_creep.pdf



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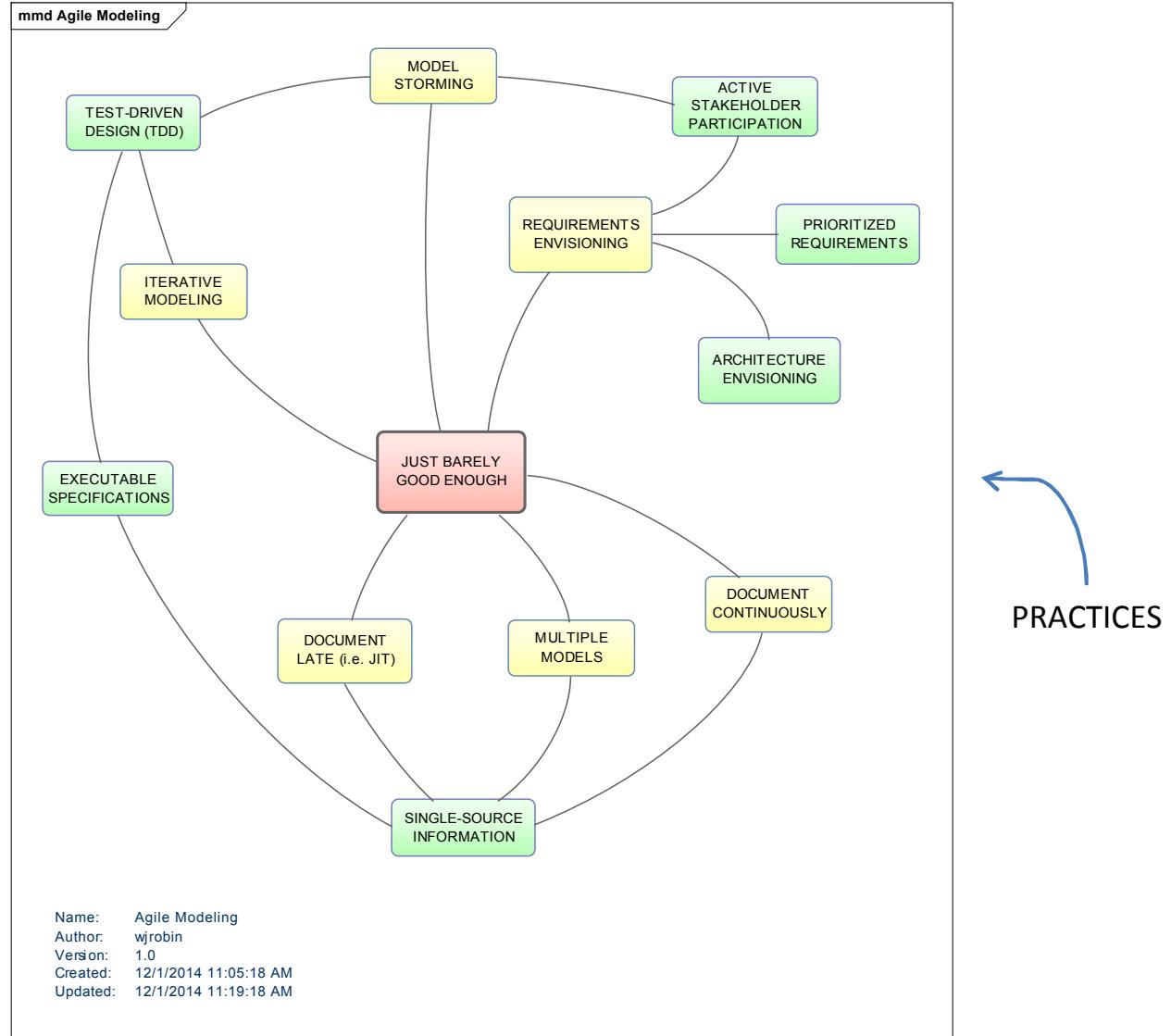
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Agile Modeling (AM)

A COLLECTION OF VALUES, PRINCIPLES, AND PRACTICES FOR MODELING [SYSTEMS] THAT CAN BE APPLIED ON A PROJECT IN AN EFFECTIVE AND LIGHTWEIGHT MANNER.



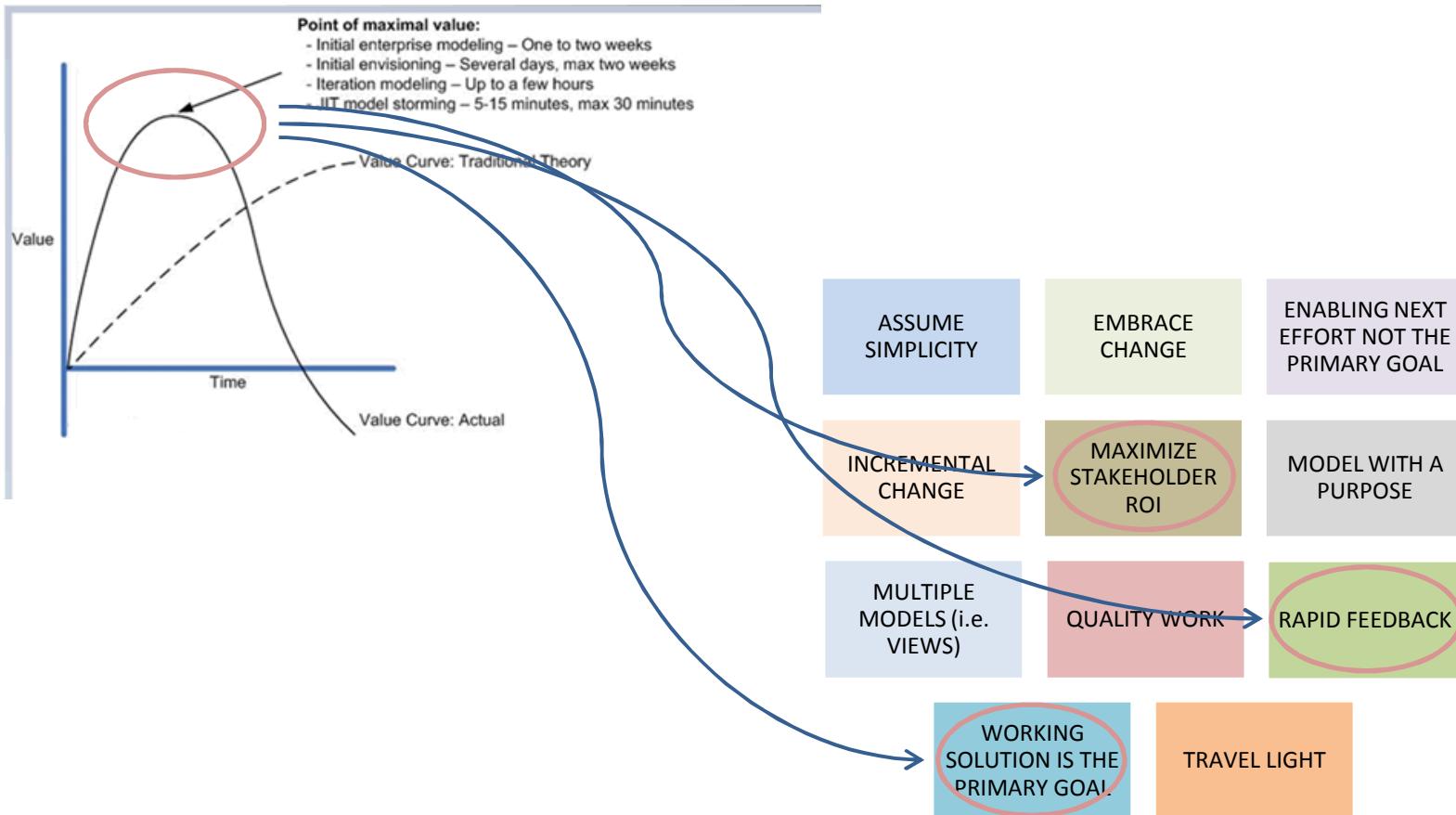
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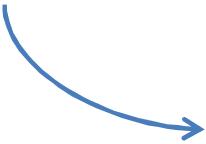


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Sc

SOME AGILE MODELING EXAMPLES



USER INTERFACE MOCKUP (ON WHITEBOARD):

Student Information

Student Number: 789-567-234

First Name: Scott

Middle: William

Surname: Ambler

Salutation: Mr. □

Date First Enroll: June 14 2003

Seminars:

Seminar	Term	Mark	Status
CSC 100 Intro to CS	Fall 2003	A+	Passed
CSC 200 Intro to AM	Fall 2003	A	Passed
CSC 303 Advanced AM	Spring 2004	—	Enrolled

Add... Drop... Transcript Close

Add a Seminar

Seminar Number: CSC #

Name: Agile *

Search

Results

Seminar	Term	Seats Avail	Professor
CSC 250 Agile Techniques	Fall 2004	4	Smith, J.
CSC 300 Agile EVP	Spring 2005	17	Jones, S.
CSC 310 Agile Database Techniques	Spring 2004	0	Johnson, H.

Course description:
CSC 310 Agile Database Techniques
This course describes evolutionary development strategies for data oriented development. See www.agiledata.org for details.

This course currently has 39 people waitlisted for it.



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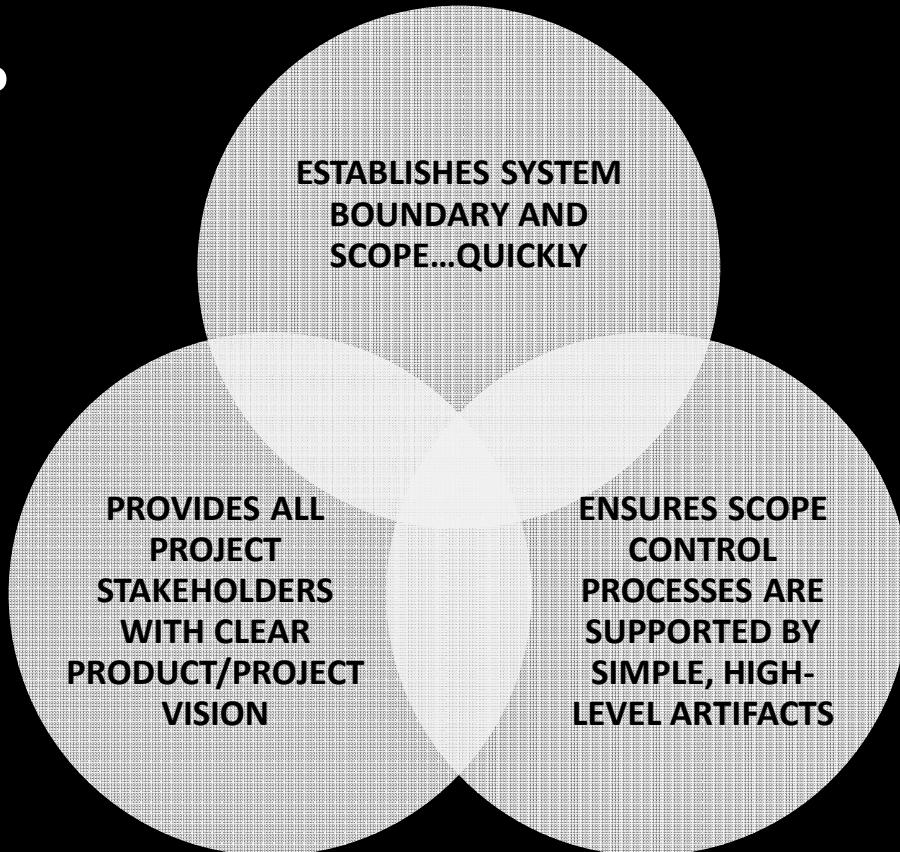


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Sc

AGILE MODELING? SO WHAT?



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COST AS A RISK:

A **COST OVERRUN**, ALSO KNOWN AS A **COST INCREASE OR BUDGET OVERRUN**, INVOLVES UNEXPECTED COSTS INCURRED IN EXCESS OF BUDGETED AMOUNTS DUE TO AN UNDERESTIMATION OF THE ACTUAL COST DURING BUDGETING.

“The accuracy of project estimates can have a dramatic impact on profitability....characterized by regularly over running [project] budgets and rarely meeting deadlines.”

<http://www.totalmetrics.com/consulting-function-points/project-cost-estimation>



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C

FACT IS...

MOST TEAMS DO SUCK AT ESTIMATION...

BUT THERE MIGHT BE A SIMPLE
SOLUTION...



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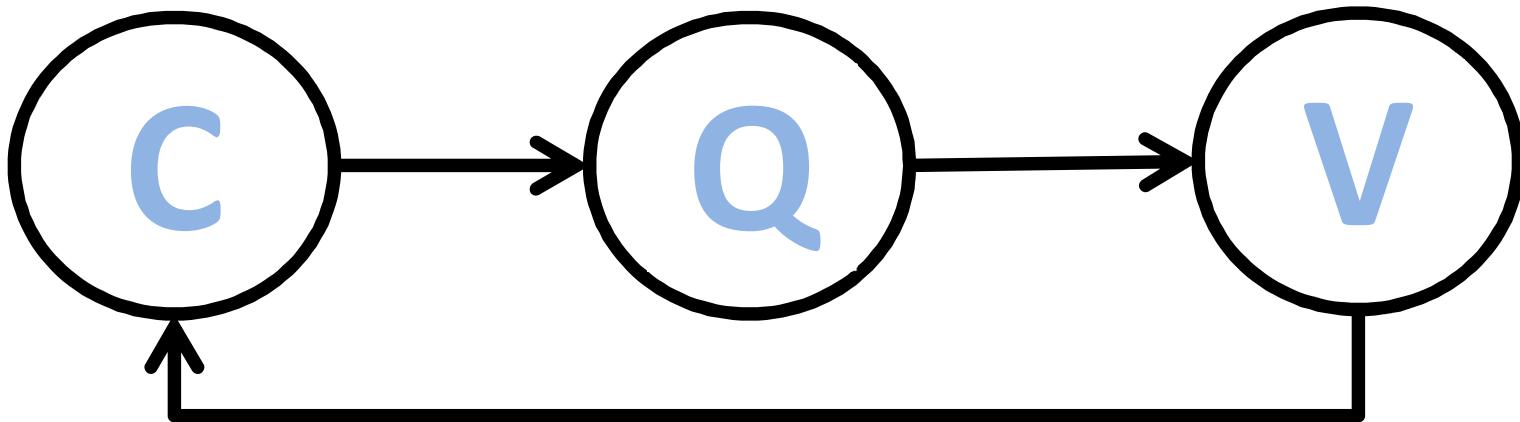


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C

START WITH A
SIMPLE PROCESS...



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C C



<http://www.istockphoto.com/vector/prehistoric-cave-painting-with-war-scene-18263666>

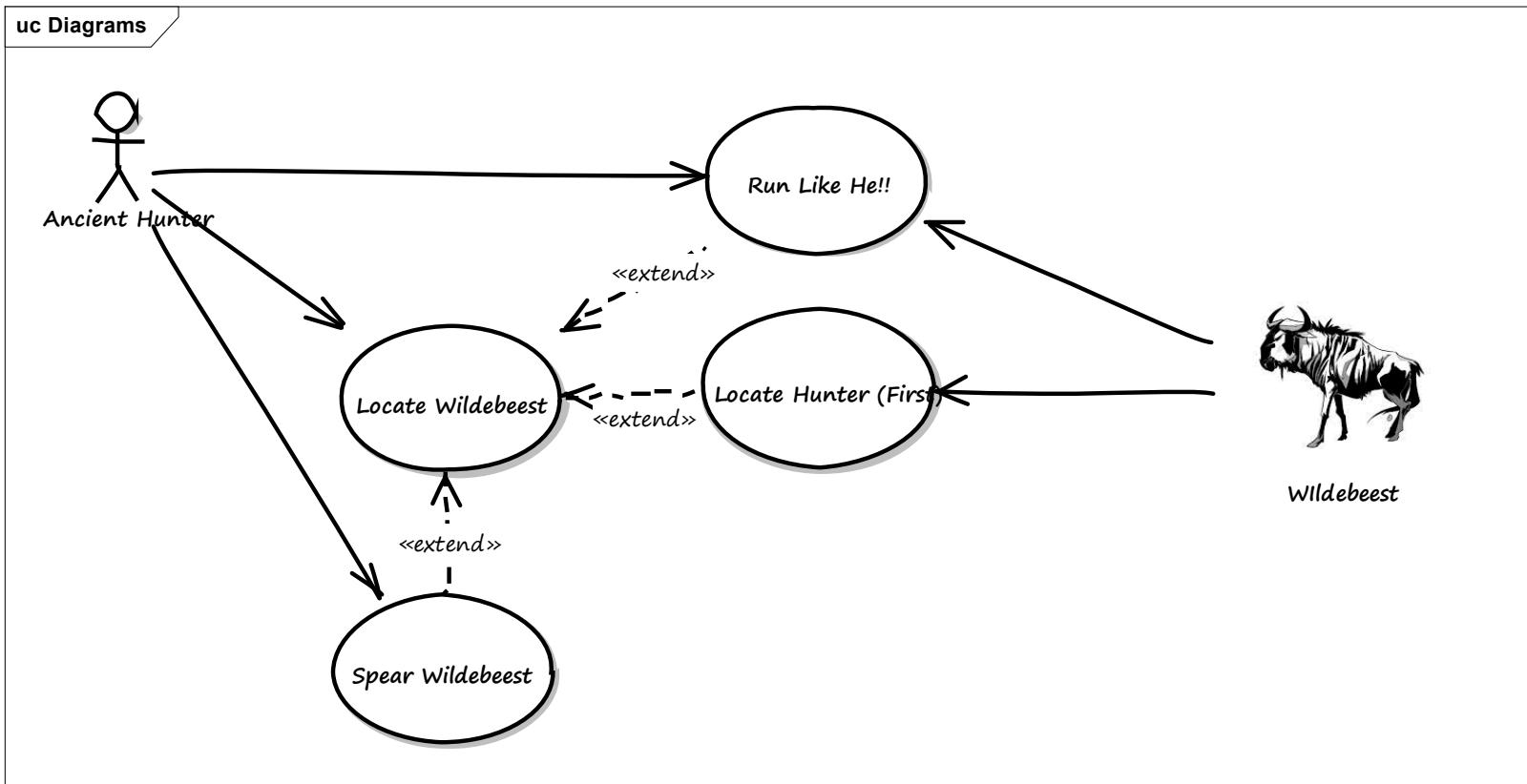
DEVELOP A
TOTAL
SYSTEM
CONCEPT
WITH USE CASES



C

C

NOW WE HAVE ALMOST ALL OF THE
INGREDIENTS NEEDED TO PERFORM
AN ESTIMATE WITH UCP!



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C C

USE CASE [PRETTY GOOD] RULES OF THUMB...

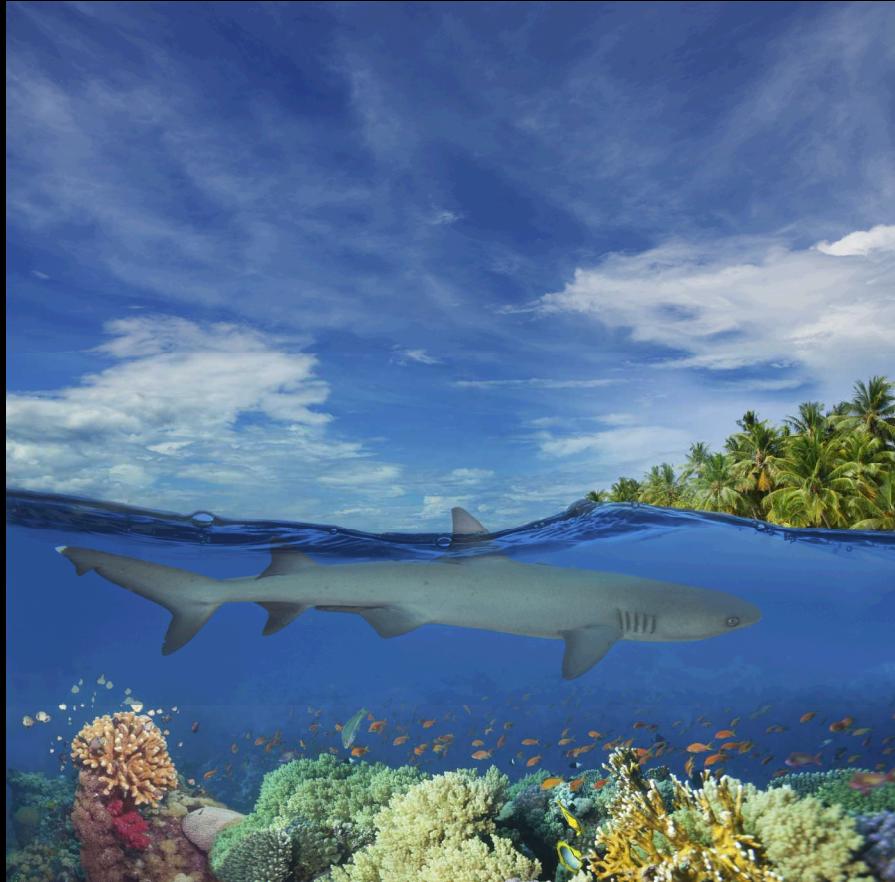
- 1 AT THE RIGHT LEVEL
- 2 BARELY GOOD ENOUGH
- 3 NEARLY COMPLETE



C C

“AT THE RIGHT LEVEL” MEANS...

THINK “CRUD”:
CREATE > READ >
UPDATE > DELETE



SEA BLUE LEVEL
(USER GOALS)

<http://www.istockphoto.com/photo/shark-swimming-among-corals-20534783>



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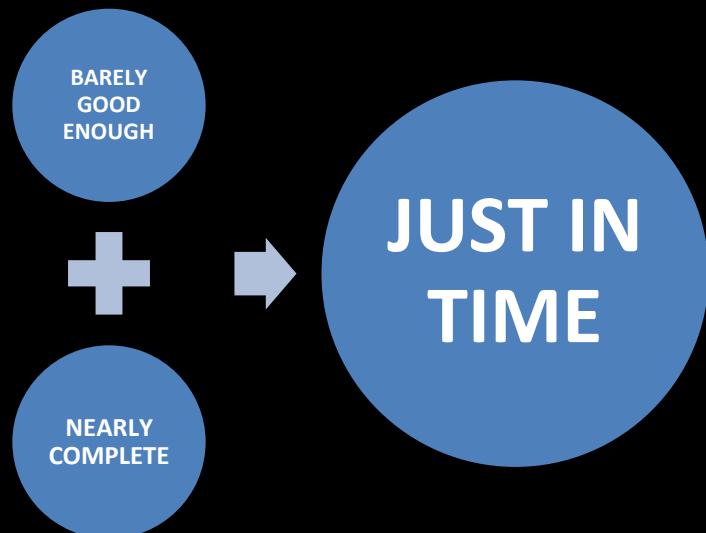


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C C

"YOU WILL EVENTUALLY ADD DETAILS TO EACH USE CASE, ADDING PRECISION. IF YOU HAPPEN TO BE WRONG (INACCURATE) WITH YOUR ORIGINAL, LOW-PRECISION STATEMENT OF GOALS, THEN THE ENERGY PUT INTO THE HIGH-PRECISION DESCRIPTION IS WASTED. BETTER TO GET THE GOAL LIST CORRECT BEFORE EXPENDING THE DOZENS OF WORK-MONTHS OF ENERGY REQUIRED FOR A FULLY ELABORATED SET OF USE CASES." [ALISTAIR COCKBURN, *WRITING EFFECTIVE USE CASES* (ADDISON-WESLEY, 2001), P. 30.]



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C Q

QUANTIFYING IS AS EASY AS...

- 1** ASSIGNING COMPLEXITY TO USE CASES AND ACTORS
- 2** CONFIGURING THE UCP MODEL FOR THE SPECIFIC EFFORT/PROJECT
- 3** RUNNING THE CALCULATION!

SERIOUSLY...IT'S THAT SIMPLE...



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C Q

USE CASE COMPLEXITY RULES

I'M MORE
COMPLEX
THAN YOU...

USE
CASE XX

ME
HUNGRY...

USE
CASE XY

NOT ALL USE
CASES ARE
CREATED EQUAL!



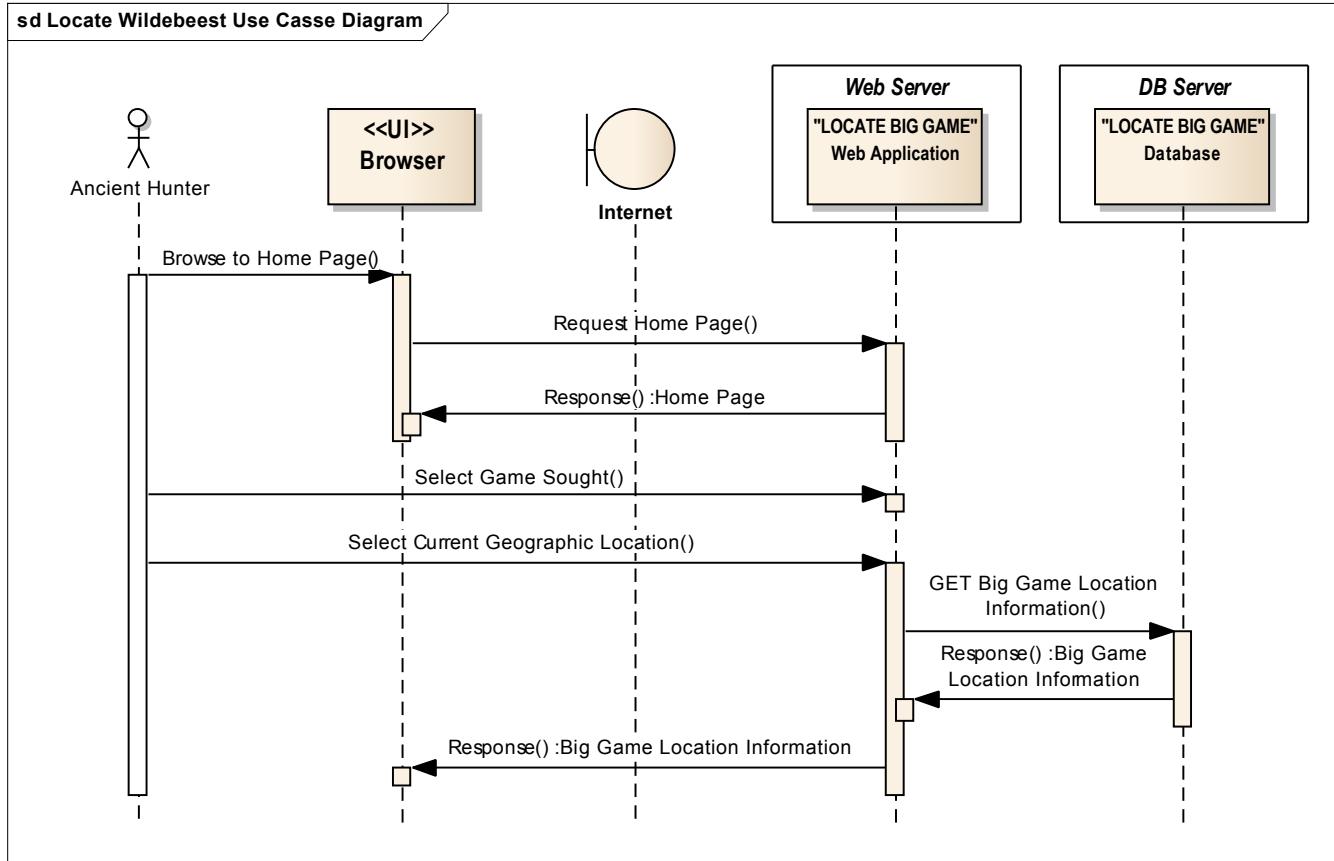
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USE CASE COMPLEXITY RULES (PART 2)



THE COMPLEXITY
OF A USE CASE IS
DETERMINED BY
THE SPECIFIC
TRANSACTION.

YEP...THERE'S
AN APP FOR
THAT!



WILDEBEEST

C

Q

ACTOR COMPLEXITY RULES



ANCIENT HUNTER



WILDEBEEST

ACTOR COMPLEXITY IS
DETERMINED BY TYPE
(HUMAN, SYSTEM, ETC.)!



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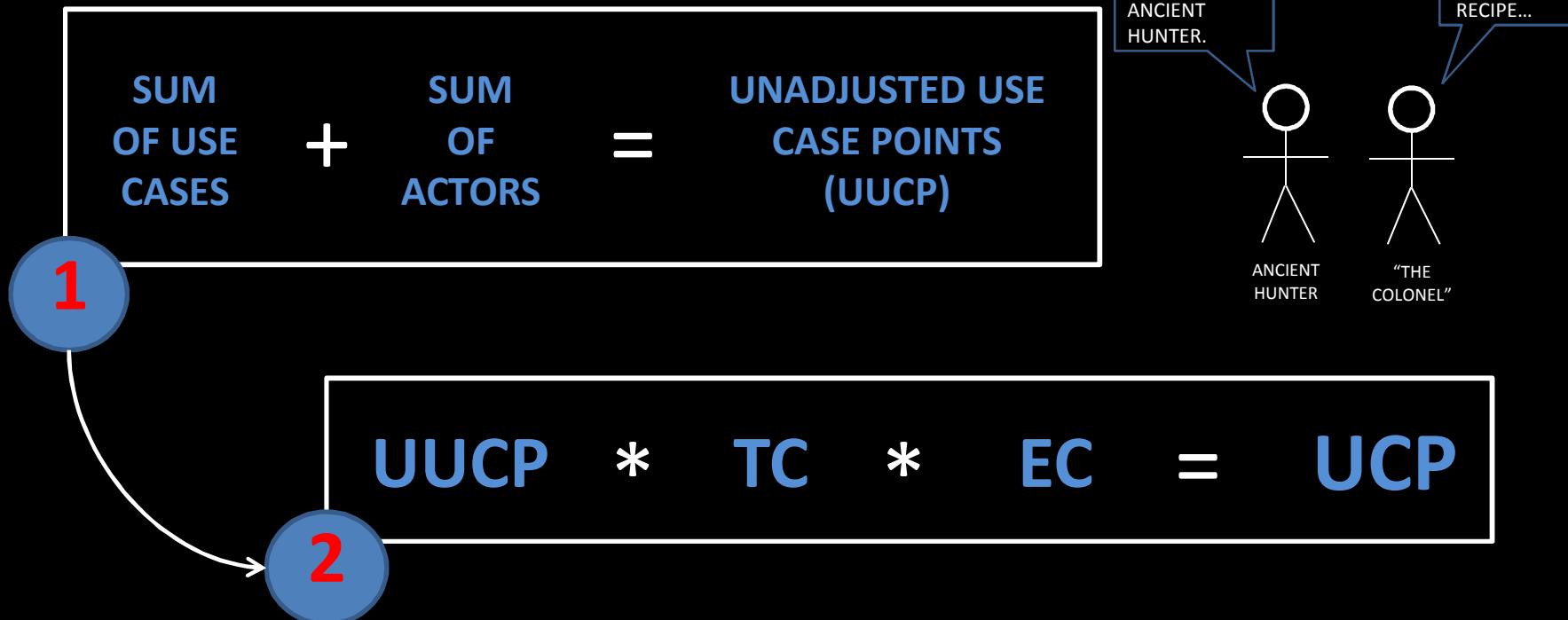


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C Q

AND HERE IS THE SECRET RECIPE...



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C Q

AND NOW THE BIG “SO WHAT?”

$$\text{UCP} * \text{HOURS PER UCP} = \text{TOTAL EFFORT (HOURS)}$$

THIS VALUE IS
DERIVED FROM
AN INDUSTRY
AVERAGE
(INITIALLY)!

AND THEN IT IS
CONTINUALLY
CALIBRATED USING
ACTUAL RESULTS



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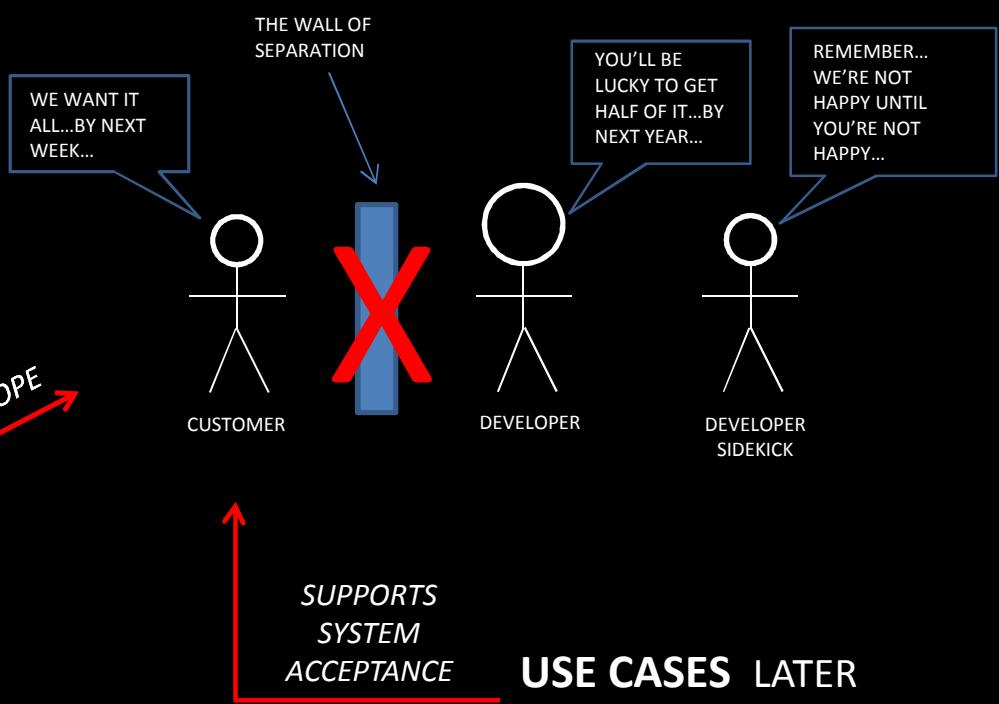
C V

**USE CASES ARE AN
AGREEMENT WITH THE
CUSTOMER**

SPECIFIES DELIVERABLES

CONTROLS SCOPE

**THE CUSTOMER AND THE
DELIVERY TEAM **PERFORM**
CONSTANT VERIFICATION**



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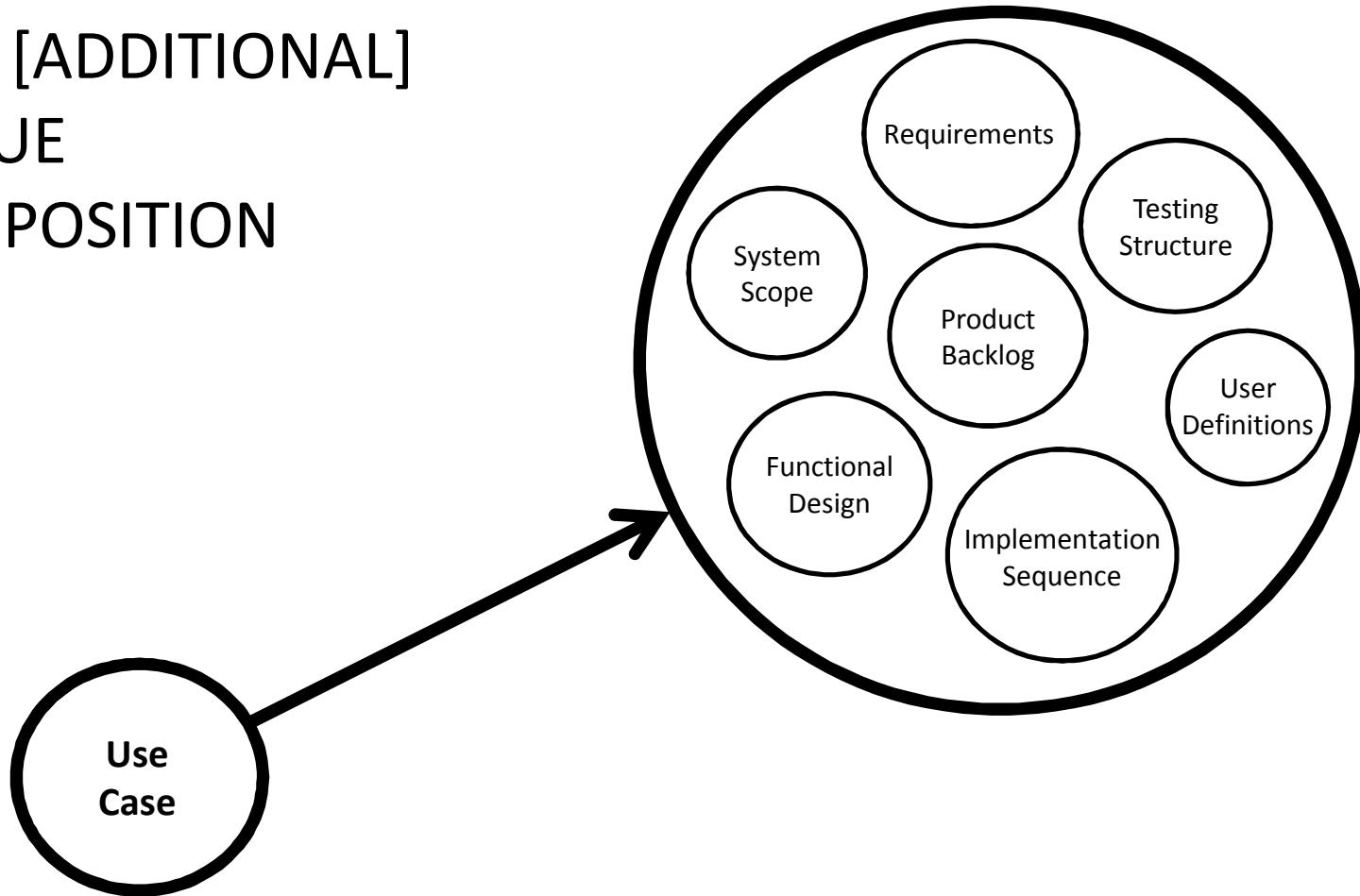


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C

THE [ADDITIONAL] VALUE PROPOSITION



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C

UCP
IS...

QUICK,
CHEAP AND
DIRTY!

AND IT WORKS!



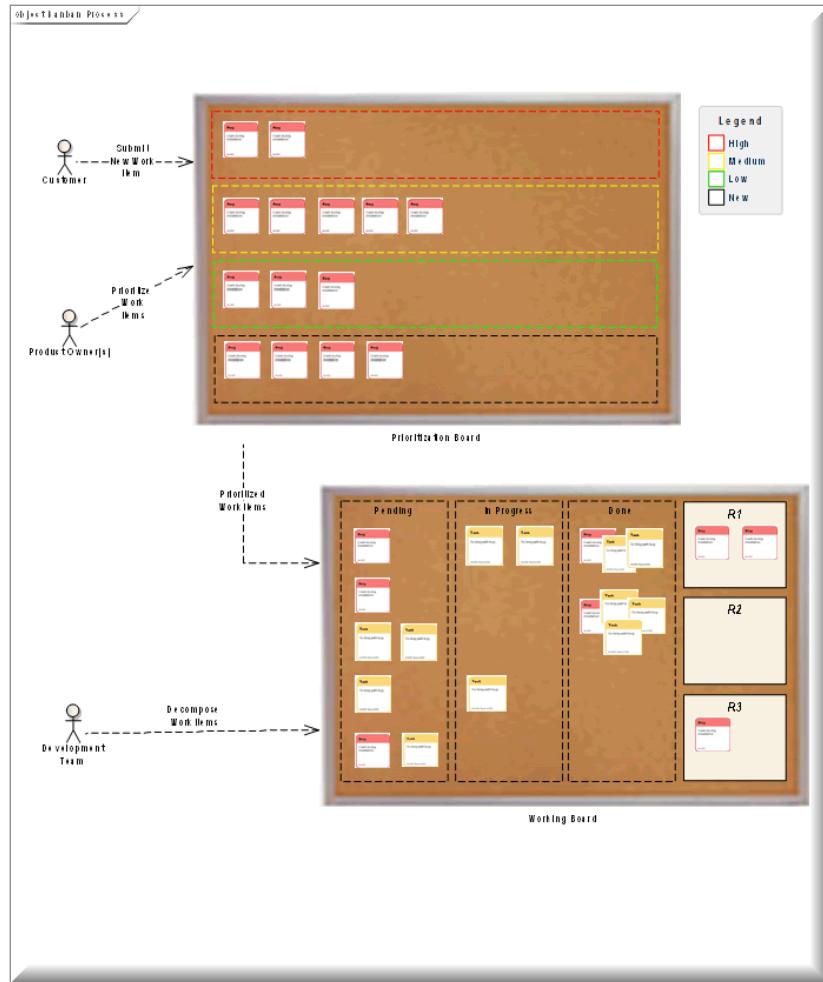
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C



BOTTLENECKS
VISIBLE IN NEAR-
REAL-TIME

IMPROVES
WORKFLOW TO
EXECUTE A TASK AT
ALL TIMES ALONG
WITH IMPROVED
RESPONSIVENESS TO
CHANGE

INTRODUCES A
VALUE-DELIVERY
CULTURE AND
REDUCES PROCESS
WASTE

TCO IS
ULTIMATELY
REDUCED BY
THROTTLING
RESOURCES TO
DEMAND



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TODAY, WE DISCUSSED...

...A RISK MANAGEMENT APPROACH THAT CENTERS ON MORE EFFECTIVE MANAGEMENT AND CONTROL OF THE TRIPLE CONSTRAINT (I.E. THE PRIMARY CUSTOMER RISKS) THROUGH THE USE OF ***AGILE-BASED METHODS***.

- S** SCRUM (OR ITERATIVE PLANNING METHODS) FOR ENHANCED AND “JUST IN TIME” SCHEDULE CONTROL
- Sc** AGILE MODELING FOR PRODUCT ENVISIONING AND ENHANCED SCOPE CONTROL
- C** RAPID ESTIMATION (VIA UCP OR SIMILAR) AND KANBAN FOR ENHANCED COST CONTROL



LOOK! IT'S "MYSTIC
BOB"...AGAIN...



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