

Collaboration over Contracts in Agile “Offshore” Outsourced Development

Craig Larman

- Please...
- Do not copy or share this material, or re-use for other education.
 - Exceptions require prior written consent of the author.

Copyright (c) 2011, Craig Larman. All rights reserved.

background...

Global Delivery Center
Founded in 2004 following the acquisition of Majoris by Valtech, the Valtech Global Delivery Center was awarded SBI-CMM Level 5 certification in July 2005.

Highlights

- Modern 45,000 sq ft. (4,200 sq.m.) facility in Bangalore, India
- Round-the-clock operations supporting worldwide Agile development projects
- 500 full-time Valtech employees
- 24/7 physical security and access control
- Virtual project rooms with complete development & test facilities
- Cutting-edge voice, data and power distribution networks.

Valtech
Global Delivery Center



served as chief scientist @ Valtech
helped create “agile offshore”
lived in Bangalore (Bengaluru)

coach/consultant for large-scale & multisite & “offshore” Scrum



Nokia Siemens
Networks



XEROX



Alcatel-Lucent

UBS



WIPRO
Applying Thought

Practices for Scaling Lean & Agile Development




Large, Multisite, and Offshore Product Development
with Large-Scale Scrum

Craig Larman
Bas Vodde



1	Introduction	1
2	Large-Scale Scrum	9
	Action Tools	
3	Test	23
4	Product Management	99
5	Planning	155
6	Coordination	189
7	Requirements & PBIs	215
8	Design & Architecture	281
9	Legacy Code	333
10	Continuous Integration	351
11	Inspect & Adapt	373
12	Multisite	413
13	Offshore	445
14	Contracts	499

customer collaboration
over
contract negotiation



Manifesto for Agile Software Development

We are uncovering better ways of developing software by doing it and helping others do it.
Through this work we have come to value:

Individuals and interactions over processes and tools

Working software over comprehensive documentation

Customer collaboration over contract negotiation

Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more.

the traditional “Contract Game”
between client and service
provider?

The Scrum Product Owner is from the the client and they have ROI responsibility -- they are an investor.

The client PO interacts directly & regularly with the provider Teams, not via intermediaries such as a project manager.

the client Product Owner steers the choice of features each Sprint and is ultimately responsible for the release goal (since they have the steering wheel), rather than the provider

The end of the “contract game” and
provider “manages the release”;
e.g., no “managed service”



“offshore”

- different culture and language
- knowledge/requirements transfer
- short-term projects rather than long-term product development
- a heightened sense of us-them
- fixed price, fixed scope
- skill differentials
- super-/subordinate relationships
- CMMI

“offshore” is used to suggest lower-cost locations in another country, usually with different language and culture

framing

both clients and traditional
offshore people and usually
(incorrectly) think “agile” =
iterative & evolutionary (i.e., not
the waterfall)

sales guide for your sales
people and your prospects

kickoff “agile workshop” for
new clients

interactions

matchmakers, not intermediary
“project managers”

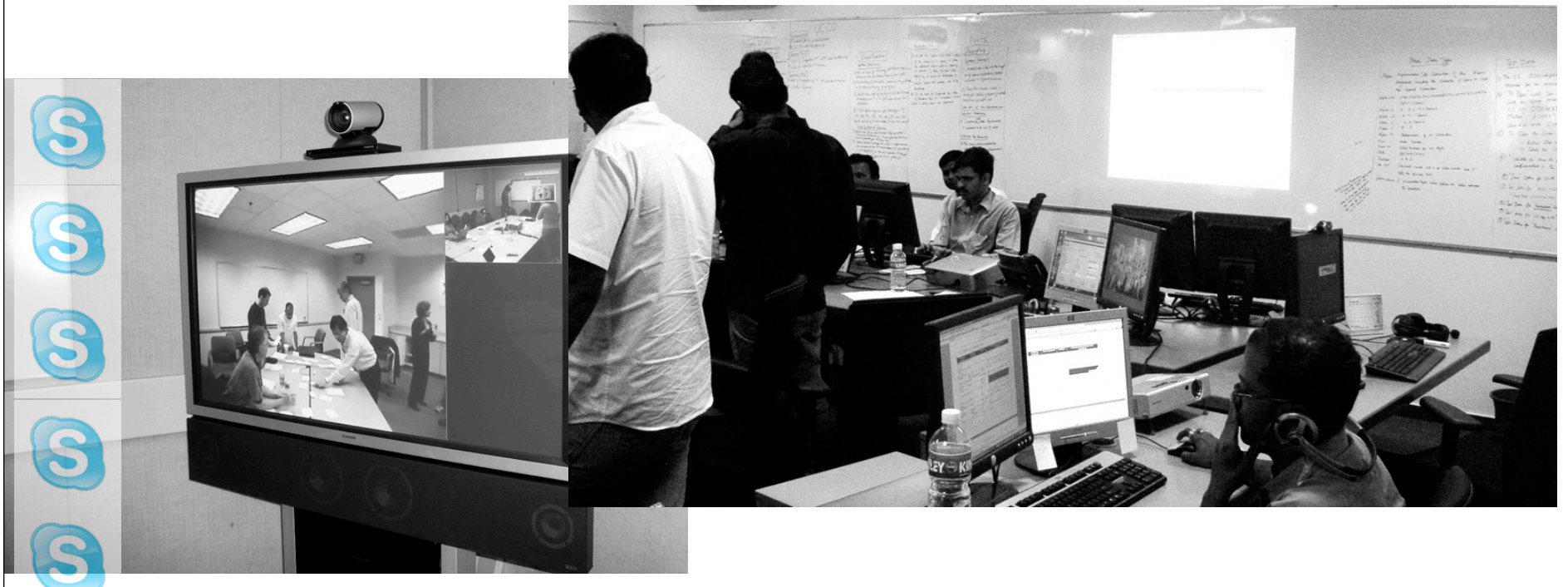


“seeing is believing”

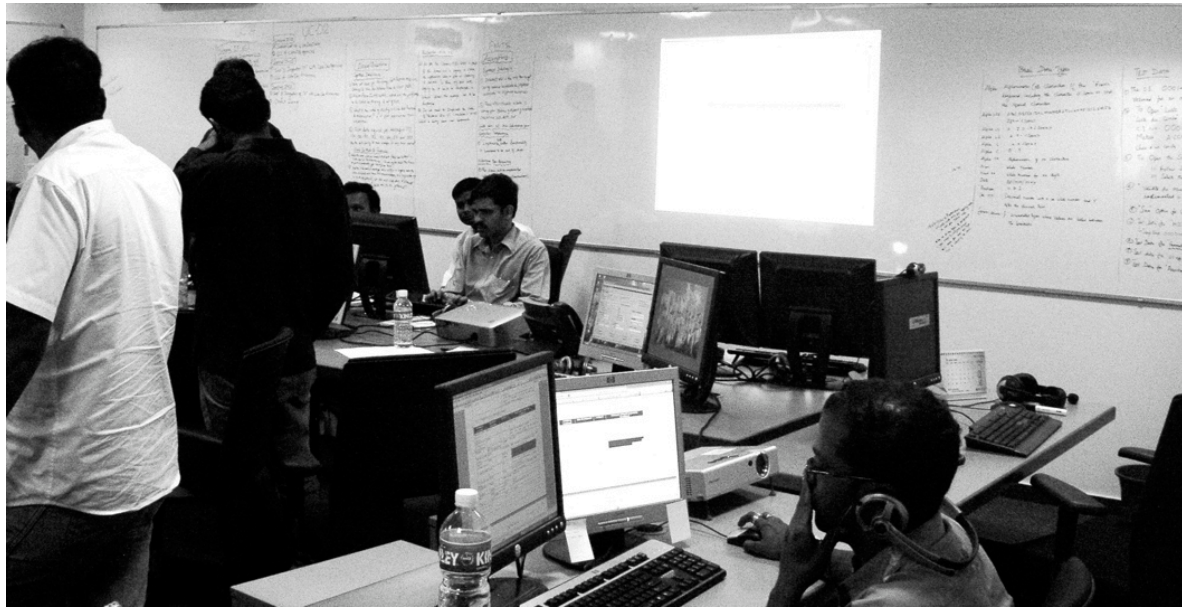
do most meetings with cheap, in-team-room video solutions

helps forms human relationships and helps with language/
accent problems

(audio channel via phone?)



24x7 “room cams” in each site





client visits offshore team before Sprint 1



team works onshore Sprint 1



rotating ambassador-matchmakers both sides



translator offshore, on team?

only hire teams where
everyone can speak English
well; evaluate them

onshore clients participate in Sprint Retrospective



avoid believing “yes”

ask open questions

PO encourages “no”

requirements

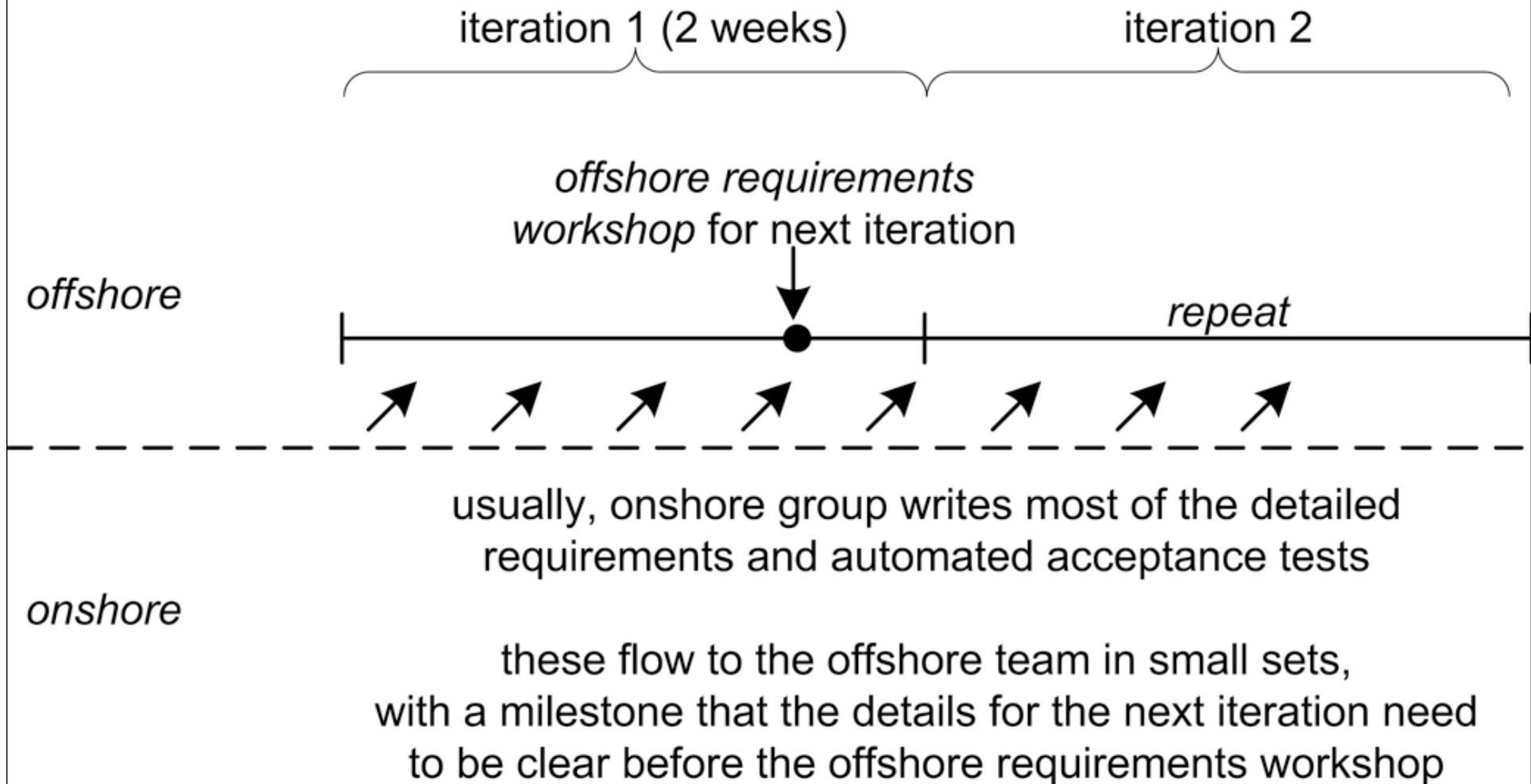
~~simple, narrow tasks
to offshore~~

challenging, “whole”,
creative features

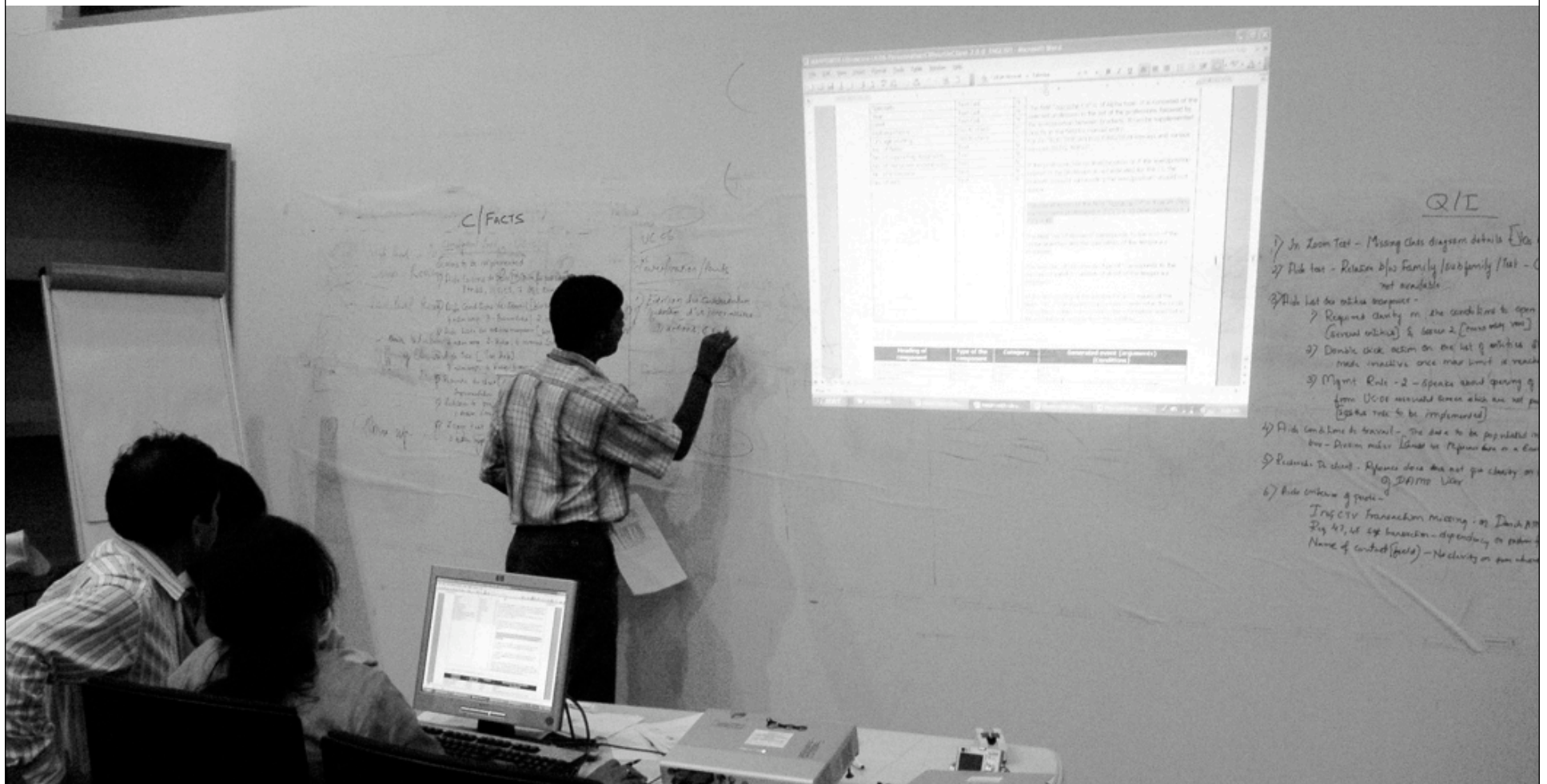
offshore vision and domain workshop at start



This hand-off waste (and process design) is undesirable but often unavoidable in offshore outsourced development, when the requirement donor is in another country

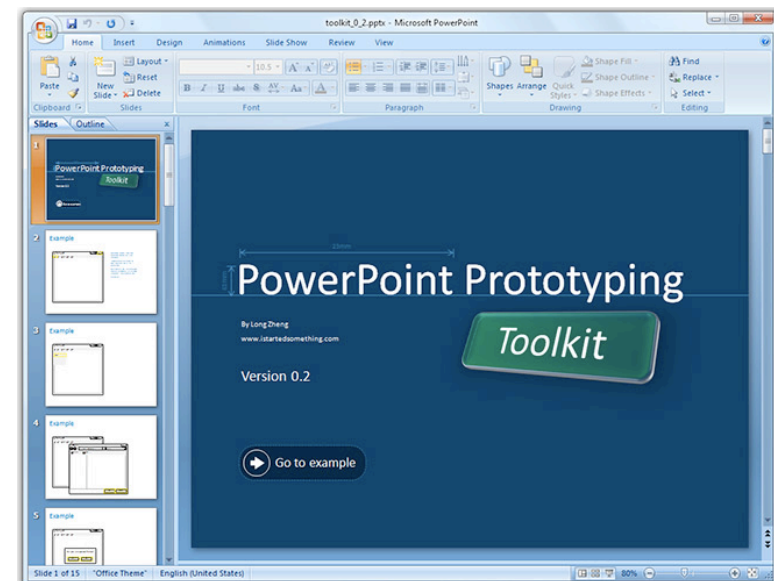
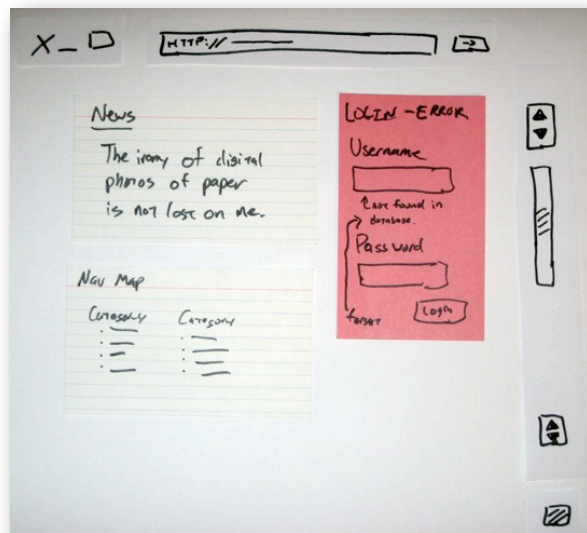


offshore requirement workshops each Sprint



adaptive requirements
documentation styles

frequent onshore UI prototypes (created with users) with paper and “PowerPoint”, shared or created with offshore teams



semi-detailed onshore
documentation, each Sprint?

semi-detailed onshore documentation with ATDD



robotframework ⁶
A keyword-driven test automation framework ⁷

- [Project Home ⁸](#)
 - [Downloads ⁹](#)
 - [Wiki ¹⁰](#)
 - [Issues ¹¹](#)
 - [Source ¹²](#)
- [Summary ¹³](#) | [Updates ¹⁴](#)

Robot Framework



testcase	Action	in op	in unit info	in unit	rest channel state	unit state	channel to CACU
	config channel	remove	SP-CACU	SS7Unit	open	TE-TEX	Removed
	"	add	SP-CACU	SS7Unit	open	TE-TEX	open

Test Cases (data-driven Robot style)

Test Case	Action	IN: operation	IN: unit info	POST-CONDITION: rest channel state	POST-CONDITION: unit state	POST-CONDITION: channel to CACU
1	Configure channel	remove	SP-CACU	open	TE-TEX	removed
2	Configure channel	add	SP-CACU	open	TE-TEX	open



Jump

Search

TWiki.org

Site Map

- Create account
- Login
- Download
- Documentation
- Presentation **NEW**
- Press coverage
- Security alerts

TWiki® - the Open Source Enterprise Wiki and Web 2.0 Application Platform



PR-IERE
valtech Use Cases

[View](#)

[Info](#)

Added by [Tom Winstanley](#), last edited by [Dirk Rejahl](#) on Sep 29, 2006

Labels: (None) [EDIT](#)

[Use Case List \(Sorted by ID\)](#)

[Use Case List \(Sorted by block\)](#)

[Use Case List \(Sorted by status\)](#)

[Use Case Model Diagrams](#)

[Use Case Narrative](#)


[Use Case Actors](#)

[Scenario List](#)

Use Case List (Sorted by ID)

- [Changes on Use case Model](#)
- [UC-RE-010 Load Incentive Definition](#)
- [UC-RE-020 Load Campaign](#)
- [UC-RE-030 Assign Incentive Definition to Campaign Triggers](#)
- [UC-RE-050 Define Campaign Trigger](#)
- [UC-RE-060 Load Target Group](#)

~~documents (Word, ...)~~



**commercial
requirement tools**

design

look at the code in-depth,
early and frequently;
respond!



```
Image P...  
Thread timer;  
public void init() { count = 0;  
    lastcount = 10; Image[10];  
    pictures = new Image[10];  
    MediaTracker tracker = new Media  
    for (int a = 0; a < lastcount;  
        pictures[a] = getImage (   
            getCodeBase(), new In  
            tracker.addImage(pictures  
    }  
    tracker.checkAll(true);  
}  
public void start() {  
    if (timer == null) {  
        timer = new Thread(  
        timer.start();  
    }  
}  
public void paint(Graph  
    g.drawImage(picture  
    if (count == last  
}  
void run() {
```


~~onshore experts
dictate the design~~

onshore experts
coach and review

~~simple, narrow tasks
to offshore~~

challenging, “whole”,
creative features ->

coach them

test

semi-detailed onshore documentation with ATDD



robotframework ⁶
 A keyword-driven test automation framework ⁷

- [Project Home ⁸](#)
 - [Downloads ⁹](#)
 - [Wiki ¹⁰](#)
 - [Issues ¹¹](#)
 - [Source ¹²](#)
- [Summary ¹³](#) | [Updates ¹⁴](#)

Robot Framework



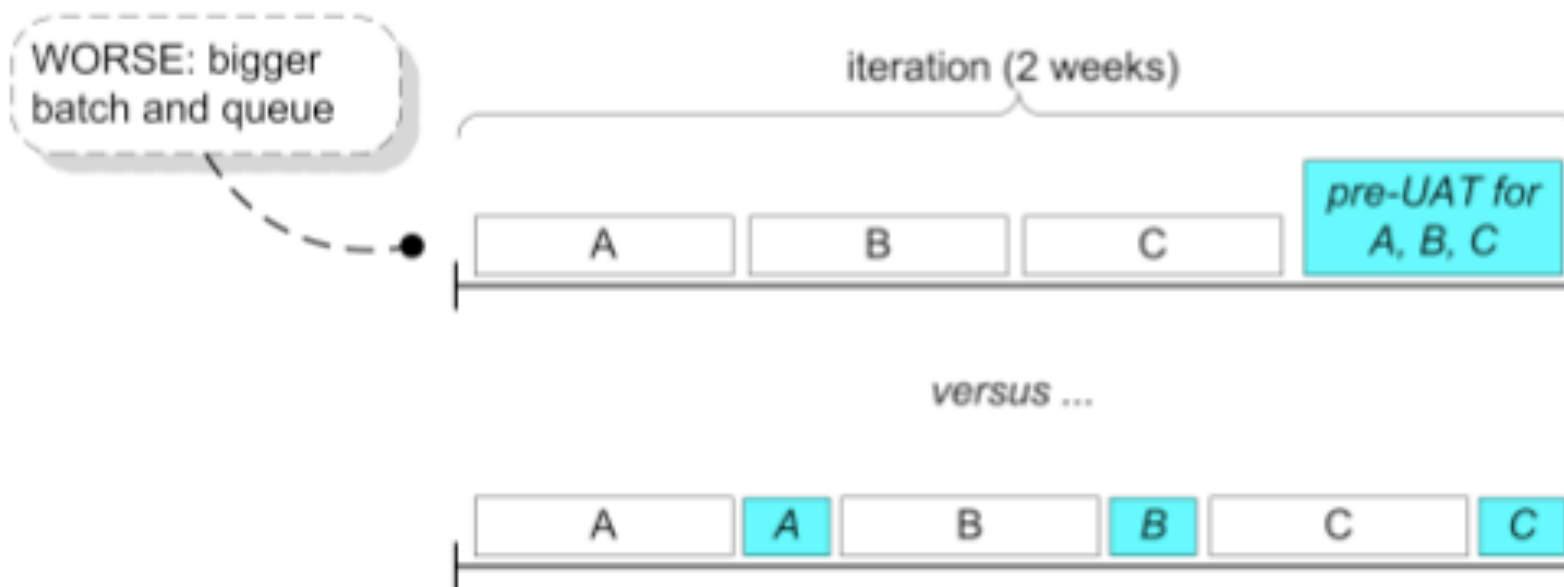
testcase	Action	in op	in unit info	in unit	next channel state	unit state	channel to CACU
	config channel	remove	SP-CACU	SS7up=0	open	TE-TEX	Removed
	"	add	SP-CACU	SS7up=0	open	TE-TEX	open

Test Cases (data-driven Robot style)

Test Case	Action	IN: operation	IN: unit info	POST-CONDITION: rest channel state	POST-CONDITION: unit state	POST-CONDITION: channel to CACU
1	Configure channel	remove	SP-CACU	open	TE-TEX	removed
2	Configure channel	add	SP-CACUn	open	TE-TEX	open

if client must do manual UAT,
then, each do it each Sprint

if must do manual UAT, then,
pre-UAT after each item



teams & misc

stable offshore teams



simple titles map to
special titles

encourage the team to
say “no”

a real ScrumMaster
intent on real self-
organization, not a
project manager

partnership &
culture

if high attrition, agile
coaching center

agile coaches from
outside the site

onshore
“management”

The diagram consists of a large red oval containing text. A diagonal red line runs from the top-right to the bottom-left, bisecting the oval. The text is arranged as follows: 'onshore' is at the top, '“management”' is in the upper-middle section, a '+' sign is in the center, and 'offshore development' is at the bottom. The diagonal line separates the 'onshore management' part from the 'offshore development' part.

+

offshore development

equal partners



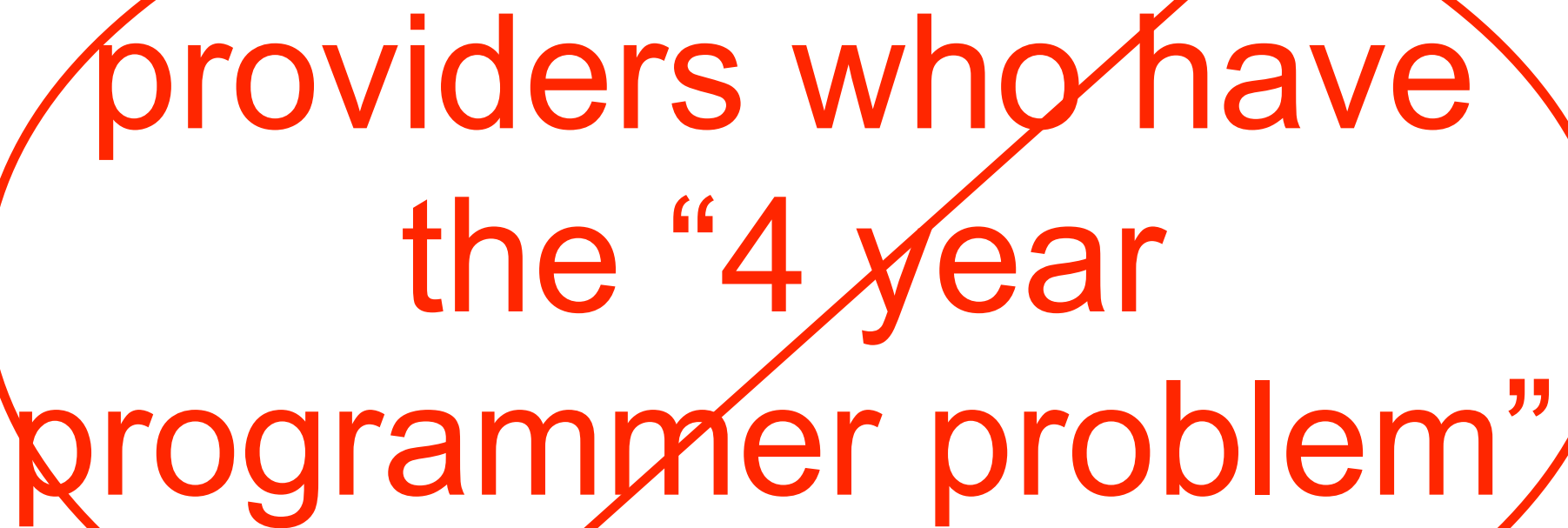
offshore a function (e.g.,
testing)

offshore cross-
functional team

~~offshore component
development~~

offshore feature
development

~~onshore cultural
favoritism (e.g.,
ignoring foreign
holidays or hours)~~



providers who have
the “4 year
programmer problem”

environment does not
“walk the talk”





Before

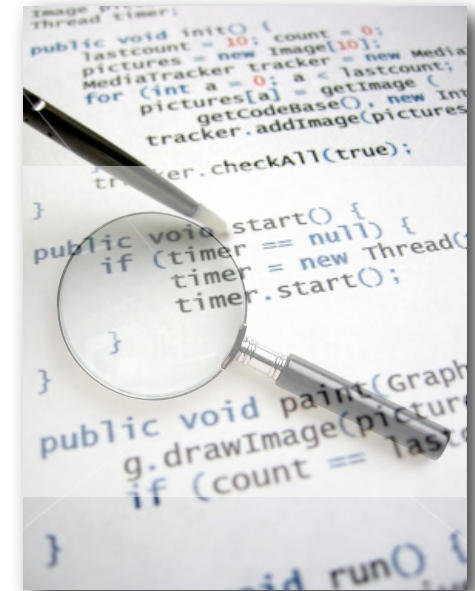


After



CMMÍ

ignore certifications, assessments, and CMMi



Go & See,
look at the code!!!!

tools



commercial tools

commercial
contracts

Practices for Scaling Lean & Agile Development



Large, Multisite, and Offshore Product Development
with Large-Scale Scrum

Craig Larman
Bas Vodde

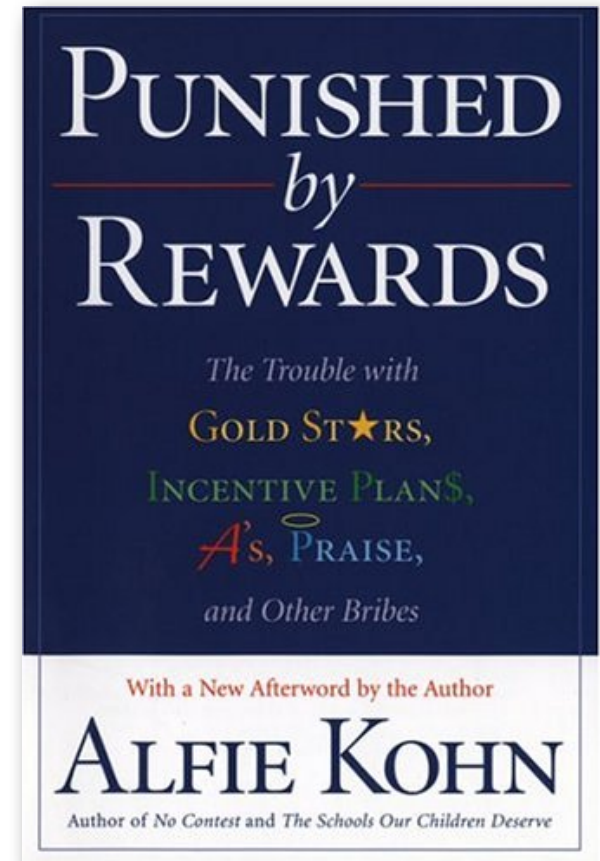
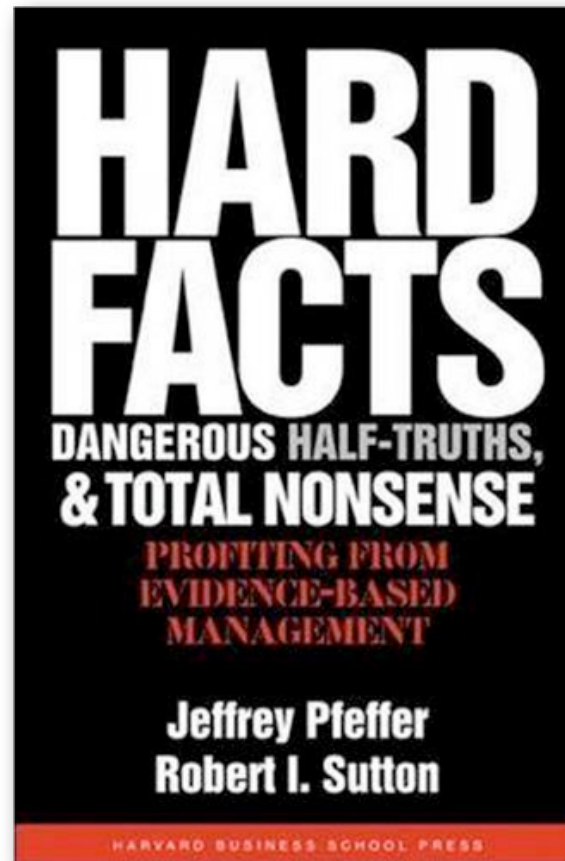
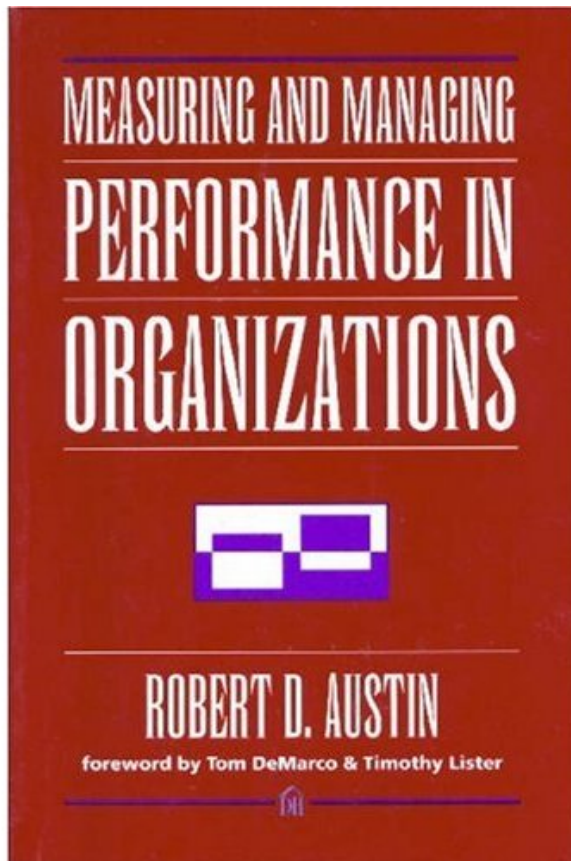


1	Introduction	1
2	Large-Scale Scrum	9
	Action Tools	
3	Test	23
4	Product Management	99
5	Planning	155
6	Coordination	189
7	Requirements & PBIs	215
8	Design & Architecture	281
9	Legacy Code	333
10	Continuous Integration	351
11	Inspect & Adapt	373
12	Multisite	413
13	Offshore	445
14	Contracts	499

educate the contract lawyers in agile & lean values, how Scrum works, the implications of PSPI each Sprint, the implications of client PO adaptively steering, silos mentality, systems thinking, & the “incentives mistake”

(they read the “Contracts” chapter and its recommended readings list, attend a CSM, etc.)

avoid “incentives” and “penalties”



Potentially Shippable Product
Increment every Sprint changes
many of the dynamics,
assumptions, and risks

termination at end of any Sprint

payment & pricing...

- pay per Sprint
- how to deal with acceptance?
- some holdback until end if a shared pain-gain model

- T&M: nice, simple model
- variations...
- capped T&M per release
- capped T&M per iteration (Sprint)
- capped T&M per iteration, with shared gain adjustment if below cap

- fixed price per iteration
- fixed price per unit of work
- relative points, use-case points, function points, ...
- may be calibrated/customized after a few iterations

- pay per use
- shared pain/gain models
 - target-cost...

shared pain/gain: Target-Cost Contracts

1. In collaboration between customer and supplier, identify, analyze, and estimate “all” requirements.
2. In collaboration, estimate the cost of change, or scope increase, during the project. This is important; target-cost contracts must “realistically” account for overall cost, and change
3. From these two elements, establish the **target cost**.
4. Calculate **target profit**, based on target cost (for example, 15% of target cost).
5. Share all details and results with customer (this is important).

target-cost contracts

$Adjustment = (ActualCost - TargetCost) * CustomerShareOfCostDiff$

$CustomerPayment = TargetCost + TargetProfit + Adjustment$

As will be seen, *Adjustment* may be positive or negative.

Assume the agreement is that 60% share of any cost difference is to the customer, and 40% share is to the supplier. Then:

target cost	target profit	target customer payment	actual supplier cost	adjustment	actual customer payment	actual supplier profit
1,000,000	150,000	1,150,000	1,100,000	+60,000	1,210,000	110,000
1,000,000	150,000	1,150,000	900,000	-60,000	1,090,000	190,000

target-cost contracts

Type	Description	May Adjust Target Cost?
fix	Changes to an implemented requirement, due to the supplier not doing what should have been 'reasonably' understood or done.	No
clarification	Changes to a 'correctly' implemented requirement, due to customer learning based on feedback.	No
enhancement	New feature.	Yes

shared pain/gain: Discounted ...

- discounted T&M, for variation from original estimate...

discounted T&M, for variation from original estimate

- assume a standard person-day rate of \$500, 35,000 person days, and estimate of \$17,500,000. The supplier offers a discounted rate of \$150, on +/- variations

$$(35000 * 500) + (5000 * 150)$$

actual person-days	actual customer payment	change in estimate-to-actual effort	change in estimate-to-actual payment	effective person-day rate
30,000	\$16,750,000	-14%	-4%	\$558
35,000	\$17,500,000	0	0	\$500
40,000	\$18,250,000	+14%	+4%	\$456

contract variations...

contract variations

- variable-price, variable-scope
- capped-price, variable-scope
 - starts in tentative backlog
 - common at Valtech India
- capped-price, partially-fixed-scope
- fixed-price, variable-scope

Multi-Phase Variable-Model Contracts

- vary the model, as trust or risk changes. e.g.,
 1. Phase 1—Fixed-price, fixed-duration, variable-scope
 2. Phase 2—Progressive contract, T&M per iteration, release cap, fixed duration

www.craiglarman.com