

StAART

Student Administration
Agile Release Train



Going agile in student administration projects

A new way of working with IT colleagues

Overview

- 5 minutes to set the scene
- 10 minutes about the theory of agile
- 10 minutes of the reality of agile
- 10 minutes on lessons learned & next steps
- 10 minutes of discussion

RMIT to scrap \$47m software system **THE** **AGE**

INDEPENDENT. ALWAYS.

February 28 2003
By Misha Ketchell
Higher Education Reporter

Senior managers at RMIT University botched virtually every aspect of the implementation of a \$47 million software system that collapsed last year, an Auditor-General's report has found. The system will have to be scrapped.

The scathing report, ordered by Education Minister Lynne Kosky last year, found RMIT did not manage the project appropriately, had a poor implementation plan, little senior management involvement, poor corporate governance and a lack of accurate documentation.

The malfunctioning system corrupted financial records and led to delays in issuing student cards and billing of international students.

Auditor-General Wayne Cameron also said that international student enrolments at RMIT dropped by between 6 and 18 per cent last year as a result of the debacle.

Mr Cameron warned that financial aftershocks might continue.

Mr Cameron revealed that Ms Kosky had last year ordered the university not to tender for a company to replace the system until the extent of the problems could be established.

The university has since decided it is not cost-effective to try to patch up the system.

RMIT vice-chancellor Ruth Dunkin yesterday said that by September this year the university would choose a new supplier.

The three contenders are Peoplesoft, the provider of the existing system, Callista software, which was developed at Deakin University, and Technology One, from Queensland.

Professor Dunkin said yesterday that she accepted that documents had been substandard but she rejected criticism that she had not played a large enough role in the software implementation.

"The project reports that came through to me and then went on to the council showed that the project was on time, on budget and meeting its milestones," she said. "We all thought that this project was actually going OK."

Professor Dunkin said certain staff had been held responsible for the system's failure, but she would not say how they had been held responsible or reveal who they were.

Opposition education spokesman Martin Dixon yesterday said the report was a damning assessment of the university's lack of planning, governance and senior management.

"It is no wonder RMIT's finances are in bad shape, with \$47.2 million spent so far on the project - 3.7 times the original budget. Every single stage of this project has been mismanaged, leading to the dire situation RMIT is now in," he said.

He urged Ms Kosky to have the Auditor-General maintain a watching brief on the system.

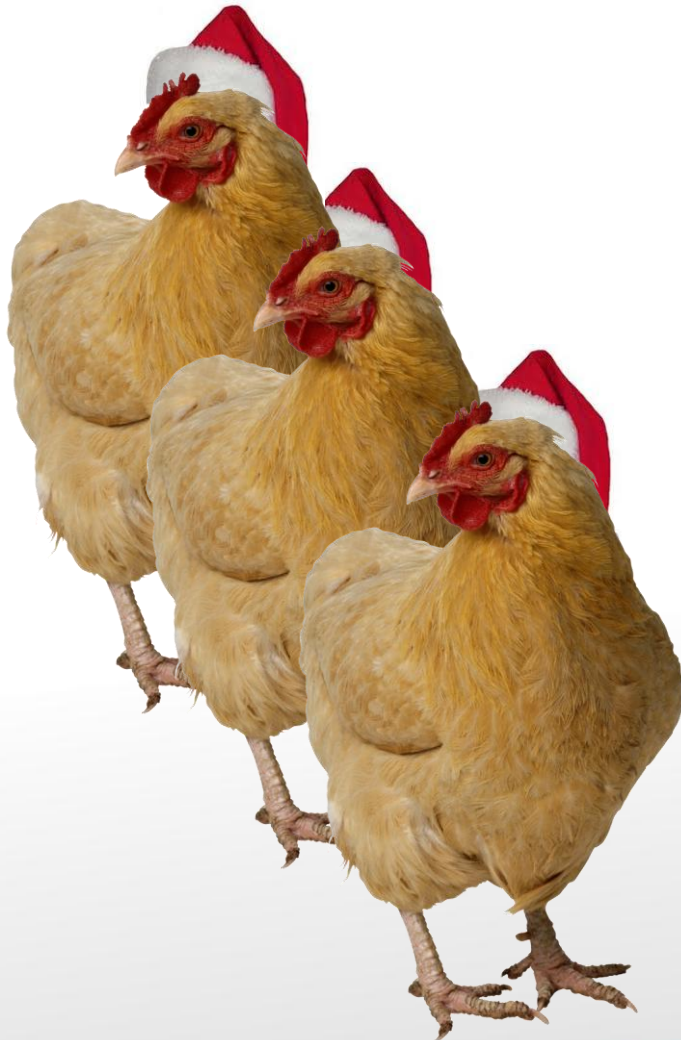
Ms Kosky said she had told RMIT it would be given 12 months to get its finances in order.

"I expect to see some major changes to the way the institution organises its finances and also that it fixes all associated problems with the Academic Management System," she said.

An RMIT spokeswoman disputed Mr Cameron's finding that international student numbers had dropped, saying they had risen by 8 per cent last year.

**Seven years of lobbying, pleading,
grovelling, developing roadmaps,
writing business cases ...**

All our christmases ...



**\$20
ml**

All our christmases ... at once

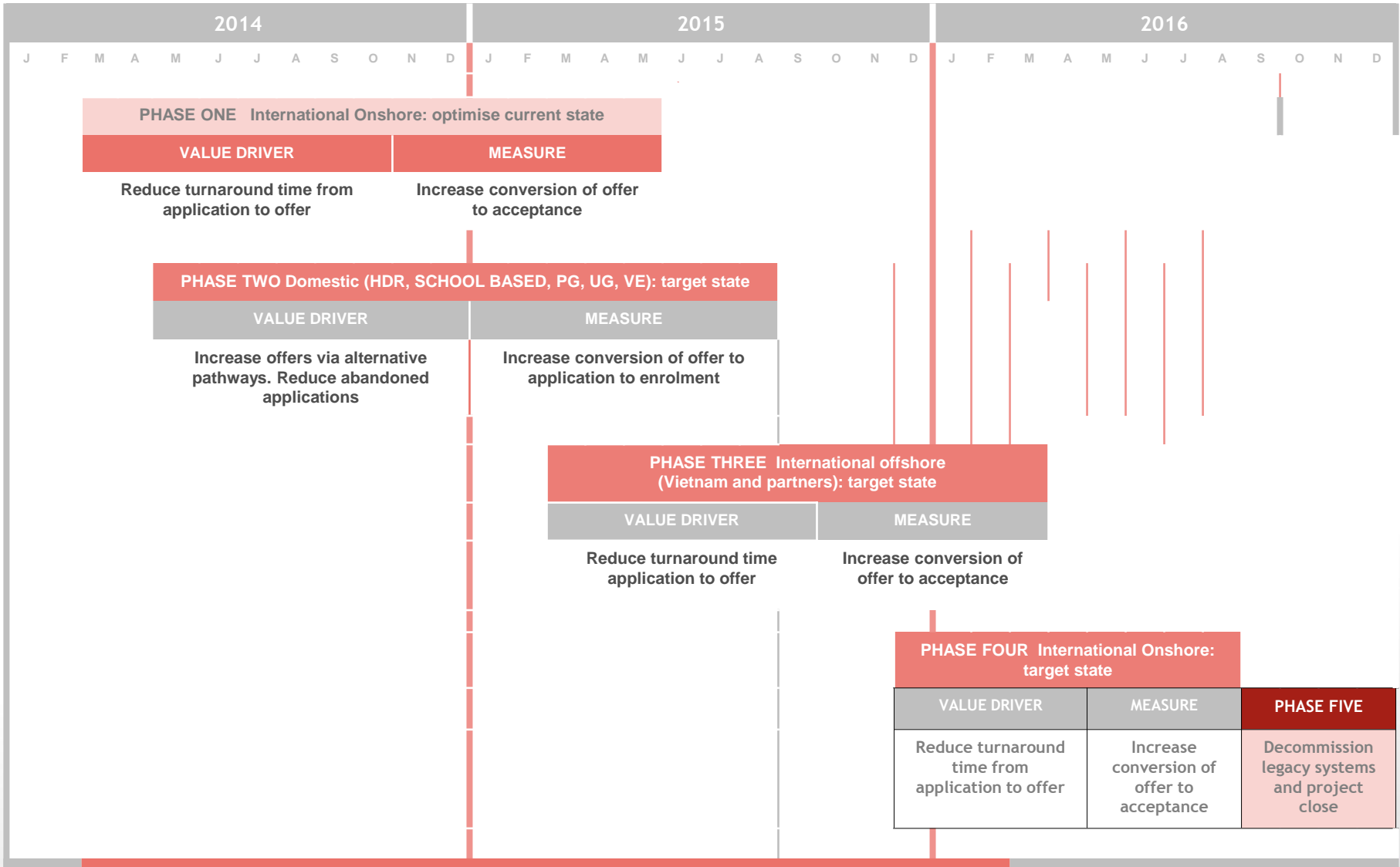


Student administration projects

- Admission
- Enrolment
- Graduation
- Student invoicing and debt management
- Program & course information management

Student administration projects

- **Admission**
- Enrolment
- Graduation
- Student invoicing and debt management
- Program & course information management



Optimise current

Target state

Project close

Student administration projects

- Admission
- **Enrolment**
- Graduation
- Student invoicing and debt management
- Program & course information management

Enrolment

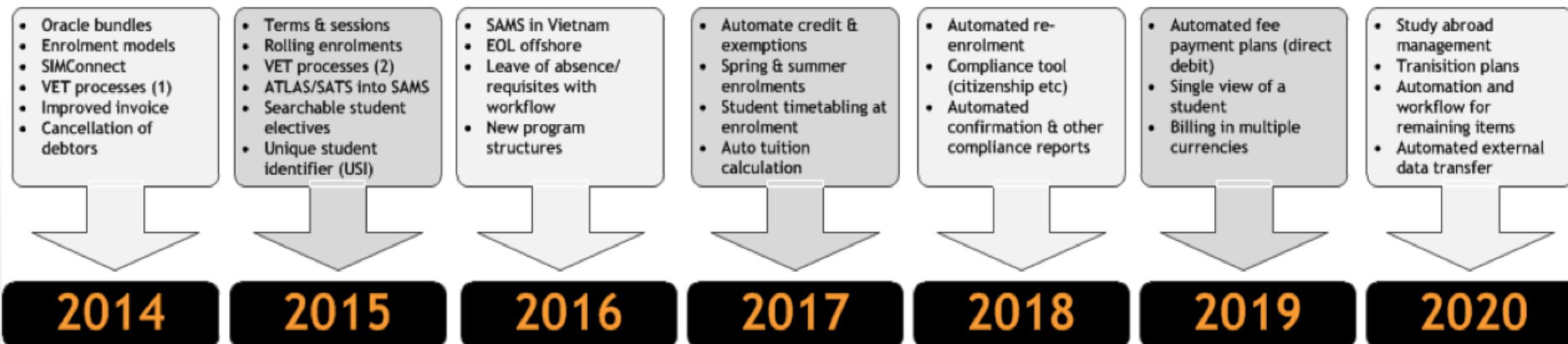
Enrolment in its broad sense encompasses registering, varying and maintaining the enrolment of a student including personal data, program allocation and course selection, fee type, student timetabling, invoicing and payment of fees and other charges, compliance management (eg eligibility for government-subsidised places), transfer of data between institutions, leave of absence and cancellation of enrolment.

ARG Vision for the future

By 2020, management of enrolment, records and fees at RMIT will have the following characteristics:

- Streamlined program structures will provide clarity for students and simpler configuration.
- All enrolment will be done online through any type of device.
- Students will choose session times as they select their classes at enrolment.
- Re-enrolment in fixed programs will be automated: students only need to confirm course choice and class times where relevant.
- Credit transfer and exemptions will be automatically applied to enrolment once approved at admission.
- Searchable student elective information will be contextualised to the student's current program/location/academic calendar/delivery mode.
- Fee discounts for early enrolment or re-enrolment can be configured.
- Confirmation reports for VET students will be generated automatically once criteria are met.
- Pre-requisite checking will provide warnings to students and course cancellation if no action is taken.
- Student applications for fee waivers will be assessed against pre-defined criteria or referred to the Academic Registrar.
- Automated alerts will be sent to students with debt: enrolment will be cancelled if unacceptable debt not paid by final due date.
- Automated messages will advise program manager when a student has cancelled enrolment.
- There will be comprehensive electronic storage of all student records with different levels of access to different categories of information.
- Students have a 'what if' tool to calculate fees according to course choice.
- Students will be able to pay fees online or arrange payment plans using direct debit.
- There will be scheduled electronic exchange of information between selected institutions for exchanges and cross-institutional enrolments.
- Students will be able to authorise automated reports of results/fees to employers, parents or sponsoring organisations.
- Self-service scanning of citizenship documentation or concession eligibility documents with security controls will attach to electronic student file.
- Students will apply online for enrolment variation with automated referral where authorisation required, and outcome advice.
- Students will apply online for leave of absence with automated referral for programs that require approval.
- Where student transfer to another RMIT program or where a program is changed, a transition plan will be generated and a new program enrolment will be generated, with credit applied.
- There will be an interface with OUA enrolments to ensure consistent information between institutions.
- Students will be able to register for study abroad or exchange online and data will be exchanged with partner institutions through secure file transfer.

ARG 2020 ROADMAP: Actions required each year to achieve vision



Student administration projects

- Admission
- Enrolment
- **Graduation**
- Student invoicing and debt management
- Program & course information management



7000 graduate in a single ceremony, managed on a 2001 Access database developed as a temporary solution by a HEW 6 staff member

Student administration projects

- Admission
- Enrolment
- Graduation
- **Student invoicing and debt management**
- Program & course information management

**New invoice
and real-time
online
accounts**

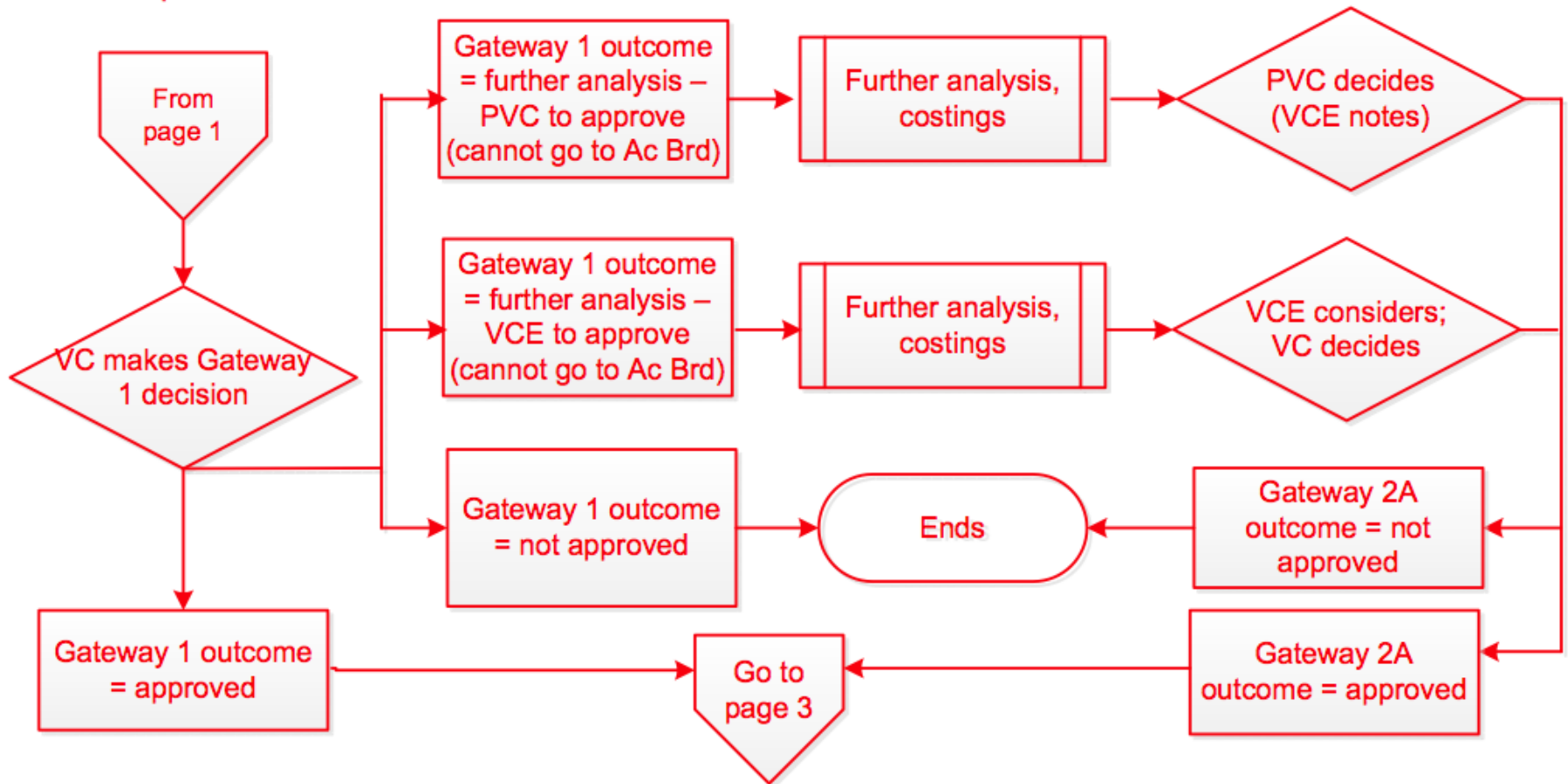
**Cancellation
of enrolment
of student
debtors**

**Third-party
contracts**

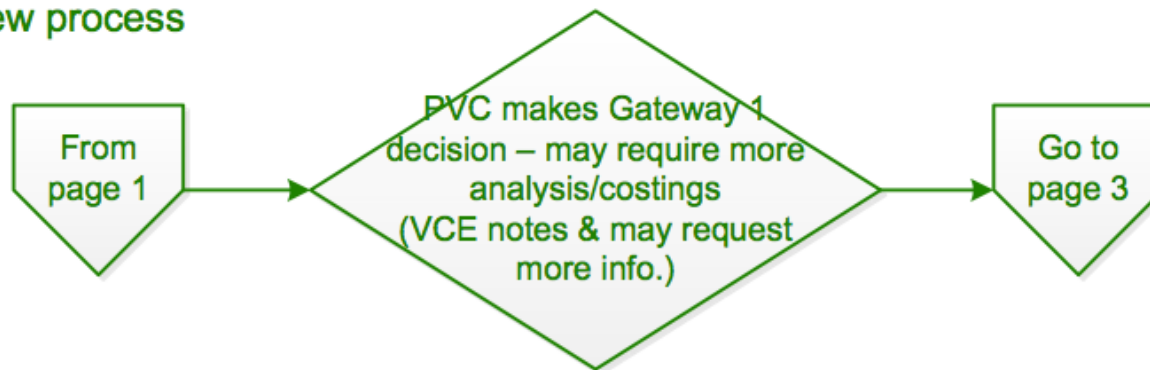
Student administration projects

- Admission
- Enrolment
- Graduation
- Student invoicing and debt management
- **Program & course information management**

Current process



New process



And then we went
~~'agile'~~

Basis of agile

- Incremental means faster delivery of software
- Faster delivery means the business can use it quicker
- Prioritise, develop, review
- Ongoing collaboration between IT and business owners

Scaled agile framework

Leading SAFe™

Leading the Lean|Agile Software Enterprise
with the Scaled Agile Framework®

SCALED AGILE ACADEMY

Training • Certification • Community



Certification Kit
INCLUDED



© 2008 - 2014 Scaled Agile, Inc. and Leffingwell, LLC.

ScaledAgileAcademy.com



SCALED AGILE ACADEMY



CERTIFIED



This is to certify that

Maddy McMaster

has successfully completed the requirements of the

Scaled Agile Framework®

Agilist (SA) Certification Program

effective Monday, June 09, 2014

valid through Tuesday, June 09, 2015

Certificate ID: 26538172-1308

Handwritten signature of Dean Leffingwell in blue ink.

Dean Leffingwell
Chief Methodologist
Scaled Agile Framework®

Scaled Agile Framework is a trademark of Leffingwell, LLC

Handwritten signature of Jennifer W. Fawcett in blue ink.

Jennifer W. Fawcett, Vice President
Scaled Agile Academy



We moved from waterfall ...

BEFORE COMES:

Requirements,
Requirements,
Requirements!

Then 150 page
business case

Secret IT business:

- Plan
- Design
- Build
- Integrate
- Test

AFTER COMES:

UAT
Communicate
Train
Manage
change
Justify the
spend

But wait, we've missed an important process here ... where does the student accept?

Sorry, it's not in the scope document you signed in blood 14 months ago

To agile ...

BEFORE COMES:

Analysis,
backlog,
prioritisation

ON THE TRAIN:

Build
Integrate
Test
UAT
Showcase

AFTER COMES:

Communicate
Train
Manage
change
Plan the next

... and the cult of agile

- New language
- Rituals and ceremonies
- More meetings
- More visibility, more control

Key concept: Cadence

- Formal ‘time-boxing’ of development activities
- PI (release): 12 weeks, 4 a year
- made up of 6 iterations (sprints) of 2 weeks
- Each PI has a 2-day planning session & ‘inspect & adapt’
- Each iteration has planning & a showcase



Feature Discovery
EXIT CRITERIA

Prioritisation
EXIT CRITERIA

PI Planning Days Backlog
EXIT CRITERIA

Ready to play
EXIT CRITERIA

oneBuildTest
EXIT CRITERIA

User Acceptance Testing UAT
EXIT CRITERIA

Back to Product Owner
EXIT CRITERIA

Britta Gramas



StAART **Student**
Administration Agile
Release Train

Continuous. Collaborative. Relentlessly improving.

**A Team of
Teams**

Key concept: Epics, features, stories

Chunks of work

- EPICS (across PIs)
- FEATURES (within a PI)
- STORIES (within an iteration)



Copyright © 2003 United Feature Syndicate, Inc.

EPIC

Improve student invoicing



FEATURE

Enhancement to invoice presentation

*As an administrator
I need to show
adjustments & concessions
on the invoice*

*So that students can
understand the
information and make
fewer contacts*

EPIC

Improve student invoicing



FEATURE

Enhancement to invoice presentation

STORY

- Display concession and HELP loan information
- Redefine charges calculation
- Display adjustments amount in Invoice Summary
- Display adjustments section in Account Statement
- Update/review non-critical existing SFS SQL validation
- Display special characters in PDF

Backlog

Placed in priority order by Portfolio

ENTRY CRITERIA

Feature Discovery

Translates to "Implementing" state on Product Backlog

EXIT CRITERIA:

- Engagement & resources tied with business
- Tech not required
- Value realized/anticipated

Prioritization

EXIT CRITERIA:

- WSJF Complete: Feature Discovery
- Ranking Complete: Feature Discovery
- Feature Definition Approved

F159
SEM AUTOMATED CANCELLATIONS

F152
Add F152 View Land Remaining reports

F150
Add F150 View Land Remaining reports

F377
Course Registrar Phase II Rollout - New Implementation

F643
A&T Credit Transfers View and Remove Configuration



Squad*

A group of people who do the nuts-and-bolts technical work (define, build & test) of delivering stories and features.



Global Graduation squad

**a.k.a. scrum*



Paul Benson
Iteration Manager



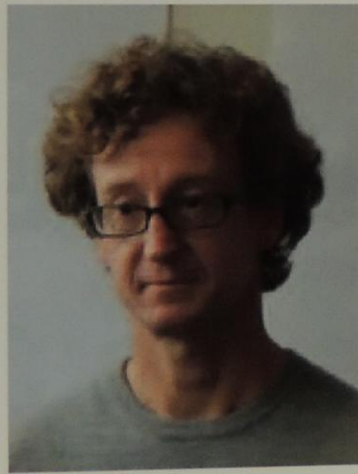
Britta Granas
Functional Analyst



Geoff Sanders
Functional Analyst



Sudakaran Ponniah
Developer



Jason Brew
Developer



Jane West
Business Analyst



Shen Tan
Functional Analyst



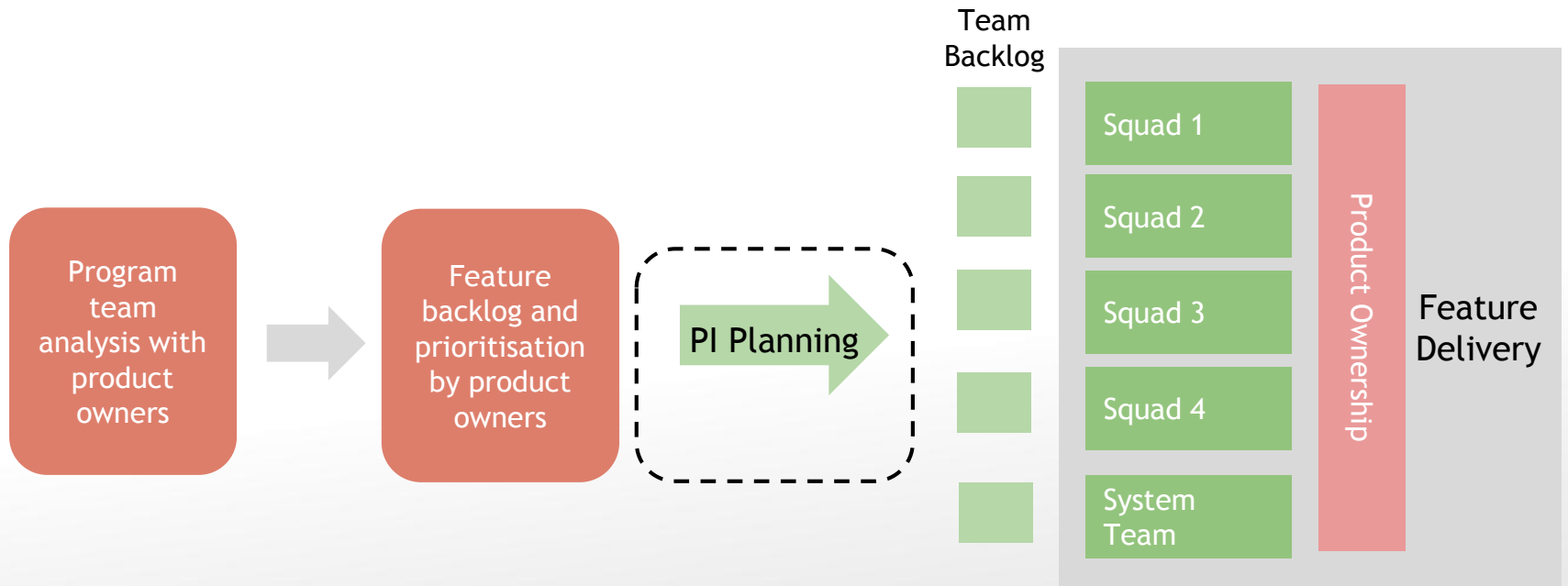
Denzil Aranha
Tester



PI planning & delivery by the agile release train

Feeding the train

On the train





**Clocks,
3 x 5
cards,
blutak
and
string**



The reality: what works well

- We fix things sooner
- It works well when the solution is known
- There is transparency through showcases
- All squads meet with the business regularly
- There is much better trust

PCIMF

P.C.I.M.F.

Amber

GLOBAL ADMISSIONS PROGRAM

G.A.

AMBER
RISK 90: DELAY TO VENDOR COMMENCEMENT MAY DELAY IMPLEMENTATION

GLOBAL ENROLMENTS

G.E.



AMBER

- WORK NOT STARTED ON GLOBAL SAMS
- ENROLMENT MODELS (DUE TO RESOURCES)

Apprenticeship & Training in SAMS
Change Plan
Plan of activities for letlan SRS
Plan of activities for Enrolment Manager Sept - Dec 2016
Review benefits analysis for presentation to September PCG

STUDENT INVOICE & DEBT MANAGEMENT

S.I.D.M



ACTIVITY:
2nd STAGE PRICE SUPPORT PROVIDED TO FACULTY TEAM
RECENTLY BE CONCERNED ABOUT
FINANCIAL COMMITMENT TO STUDENT INVOICE

GLOBAL GRADUATIONS

G.G.



AMBER

- Business Availability during critical time
- possible scope creep

HEALTH STATUS

KEY ACTIVITIES THIS PERIOD

TOP RISKS

ACTIVITIES

DELIVERABLES

FUNNEL

REVIEW

ANALYSIS

The Assessment
- pre-learned design completed
- technical feedback (completed)
- strategy aligned - completed
- data model aligned
- proposal map
- SOW agreed & time confirmed
- technical reviewed by PM
- PO analysis

UX Response - Scenarios
Single State ERMS / ADVANCE DASHING VIEW
MIA WORKING - define low state pattern
- create state dependency
- determine what design approach (with state)
MR (SRS)
- create a model
- create a design
- create a design
IMPACT RIGHTS
- create a design
- create a design
SOW vendor
- create a design
- create a design

Technology related to PCG
- list in capitalization
- 2016
- list in capitalization
- 2016



RISKS
- COMPLETION OF COST OF PROJECT

Participation of key business stakeholders

IMPLEMENT BUSINESS CASE FOR IAC 3
PARTIAL ANALYSIS FOR IAC 3 FOLLOWING DISCUSSION FEATURES
KEY ACTIVITIES FOR IAC 3 - COLLECT IMPLEMENTATION PARTNER
SOLUTION ARCHITECTURE ANALYSIS - DISCUSSION

Right side of the board containing various sticky notes, diagrams, and additional project information.

“The most efficient and effective method of conveying information to and within a development team is face-to-face conversation.”

- Agile Manifesto Principle #6



The reality: challenges

- Time commitment for business owners
- Language excludes people
- It's not really incremental
- 'Product ownership' is complicated in a university
- We haven't got the backlog right yet

Being agile in a waterfall culture

- Governance of projects assumes you can decide deliverables 12+ months in advance
- Reporting is not aligned with agile cadence
- Delivery of business ‘benefits’

Completed feature
(Business Use)

Completed feature
(Ready for deployment
or not for deployment)

Committed / In progress
feature

Planned feature

Backlog feature

S Stretch Feature **★** Feature with no funding / not in business case

July 2014 > January 2015

January > September 2015

October 2015 +

PI 14.3 (PSI 1)

PI 14.4 (PSI 2)

PI 15.1

PI 15.2

PI 15.3 (Current)

Backlog PI x

E10: Manage Conferrals

F19: Graduation in Absentia - Completions DB Trigger (Students Selected)

F20: Graduation in Absentia, Completions trigger (Automatic conferral)

F21: Graduation in Absentia - Self identification

F252: Finalising Apply to Graduate In Absentia

F1131: Graduation ATG & COA Integration

F257: Manage Award Withdrawals **★**

F255: Conferral of Inactive Students

F254: Conferral of School List/Industry Groups

E42: Manage Graduation Ceremony

F147: Manage Testamurs

F148: Manage Statement of Academic Completions (SAC)

F150: Manage Transcripts

F310: Student Confirmation of Attendance at Onshore Melbourne Ceremony

F311: Student Confirmation of Attendance at Offshore ceremony

F421: Staging & Seating for Ceremonies in SAMS

F908: Staff & Academics Ceremony Registration

F312: Change of Graduation Option

E43: Manage Award Documentation

F852: Printer Configurations for SAC (Statement of Academic Completion)

F172: Advanced Management of Award Docs - Manage Award Verifications **★**

E45: Additional Functionality & Decommissioning of Grads DB

F150: Transcripts rewrite to remove Paris [BAU]

F408: Decommission PARIS [BAU]

F898: Global Grads Go-Live & Deployment

F968: Exam Header/Covers Generator **★**

F971: Manage Exam Print Paper database **★**

F969: Exam Supervisor Allocation (B&P work only) **★**

VERSION
11/8/2015

Managing change

- SAFe is about software development: our work is as much about process change
- Agile assumes product owners will have authority to make all decisions
- There is not always a single product owner



Collaboration is better than before

Who is driving the bus?

- Feature owners vs system owners vs project owners vs VIPs
- Who decides business value?
- What do you do with new priorities after priorities have been agreed?



PROGRAM RISKS

RESERVED DINED ACCEPTED MITIGATED

STABILITY
AVAILABILITY

FULL
OUTAGE
REPAIRED

WHAT IF WE
DO NOT USE
ACCEPTED
SUPPORT
(SCHEDULE)

WORLD WIDE
DEFENSIVE
AVAILABILITY

FLEXIBLE
ENLIGHTENED
MODEL
(changes in)

NEW MODEL
RE-ENGINEERING
(NEW)

NEW MODEL
NOT BEING
FINANCED BY
RISK

NEW MODEL
RE-ENGINEERING
(NEW)

NEW MODEL
RE-ENGINEERING
(NEW)

PROGRAM IMPACTS

Impact Score
Statement

Is documentation over-rated?

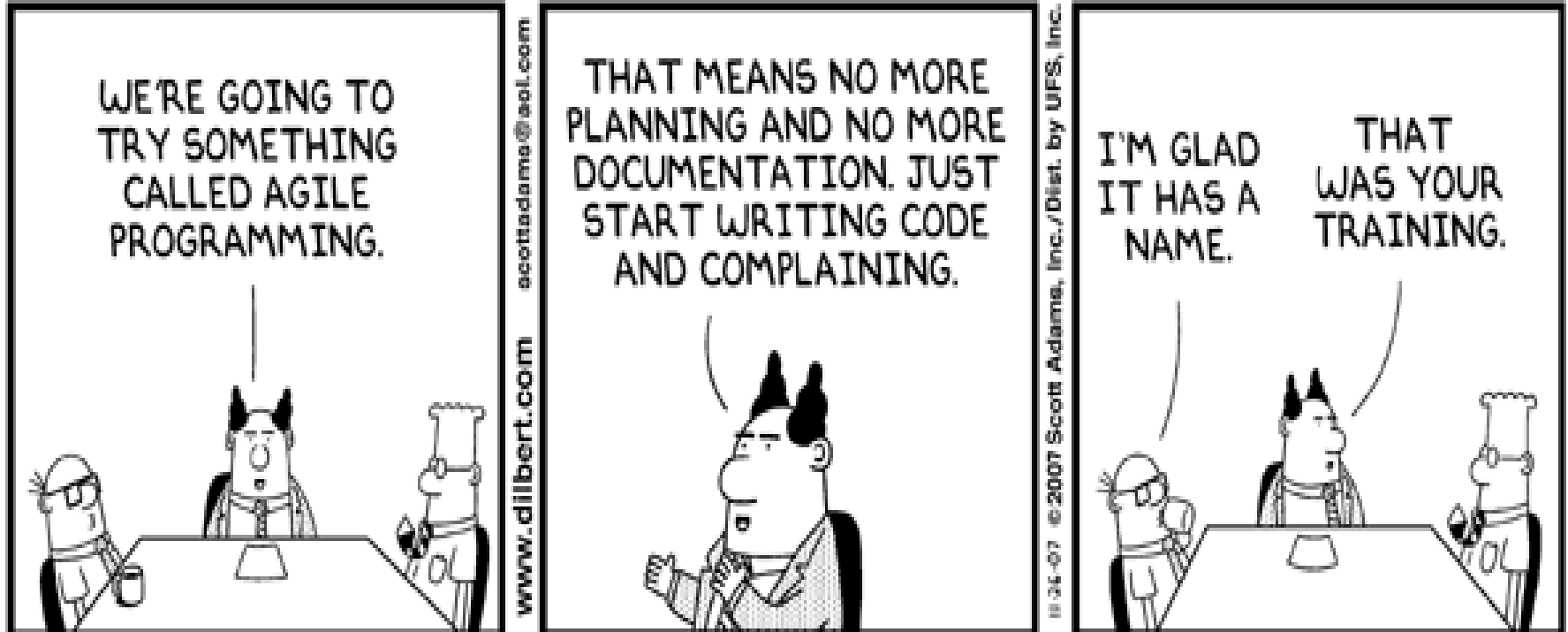
Once upon a time



Summary

- It's new
- It's more work than we had imagined
- We haven't got it right yet
- It has real potential to help us deliver on our student administration roadmap

Questions and suggestions?



© Scott Adams, Inc./Dist. by UFS, Inc.