



# Software Development Methodologies

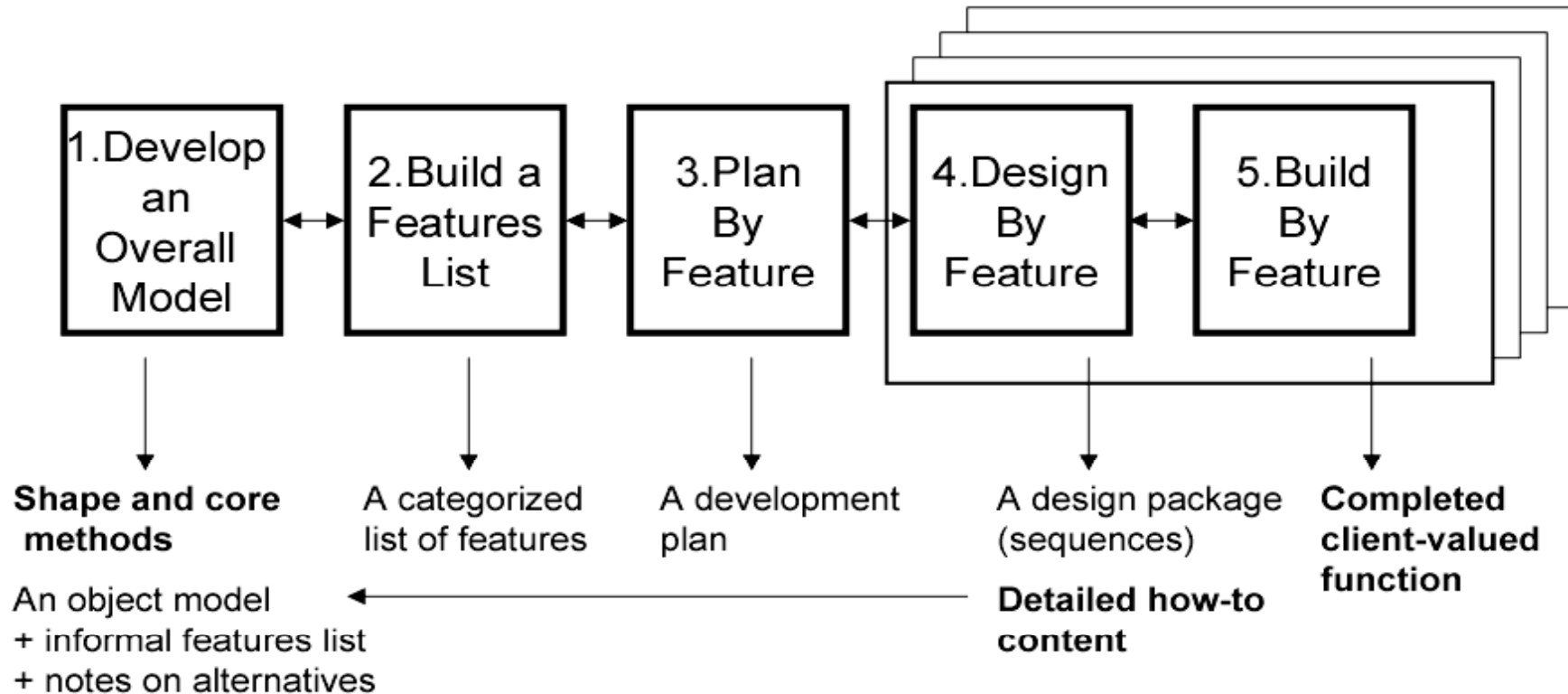
Lecturer: **Raman Ramsin**

## Lecture 14: FDD

### Basic Augments



# FDD Process



[Palmer and Felsing 2002]



# FDD Augments

## ■ Extension Areas

- Integration (Build) and Deployment
- Project Management
- Configuration Management
- Quality Assurance



# Integration and Deployment: Build Process

- At regular intervals, all the source code for the features that have been completed to date is taken with the libraries and components on which it depends and built as a complete system.
- **Flexible Process:** Build frequency is decided by the Managers, and may or may not entail immediate deployment:
  - Some teams build weekly, others daily and others continuously depending on the size of the system.
- A regular build:
  - helps highlight integration errors early.
  - ensures that there is always an up to date system that can be demonstrated to the client even if that system only does a few simple tasks from a command line interface.
- The tests built by the feature teams to test individual features are grouped together and run against the completed build to smoke out any inconsistencies that have crept into the build.



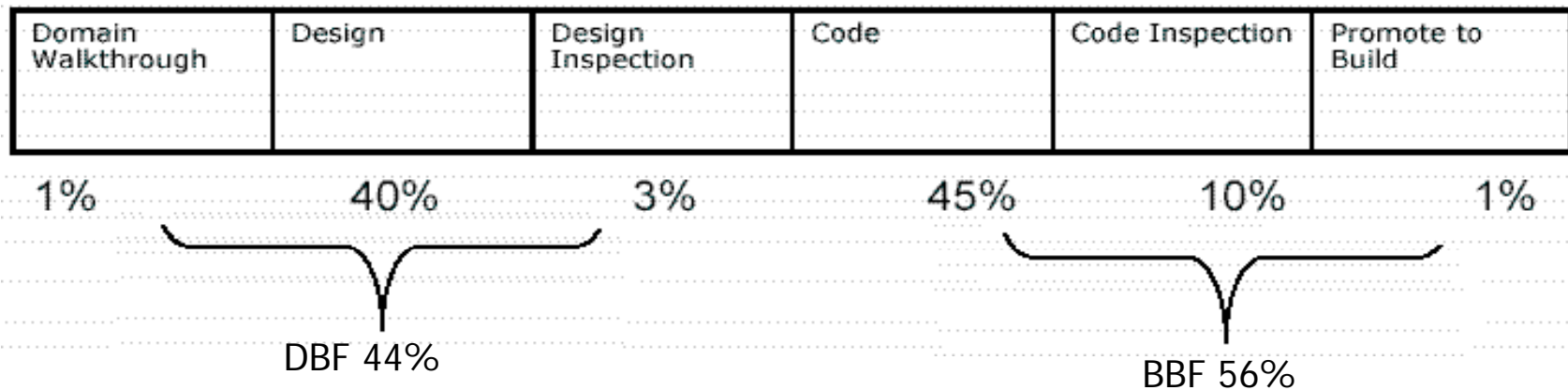
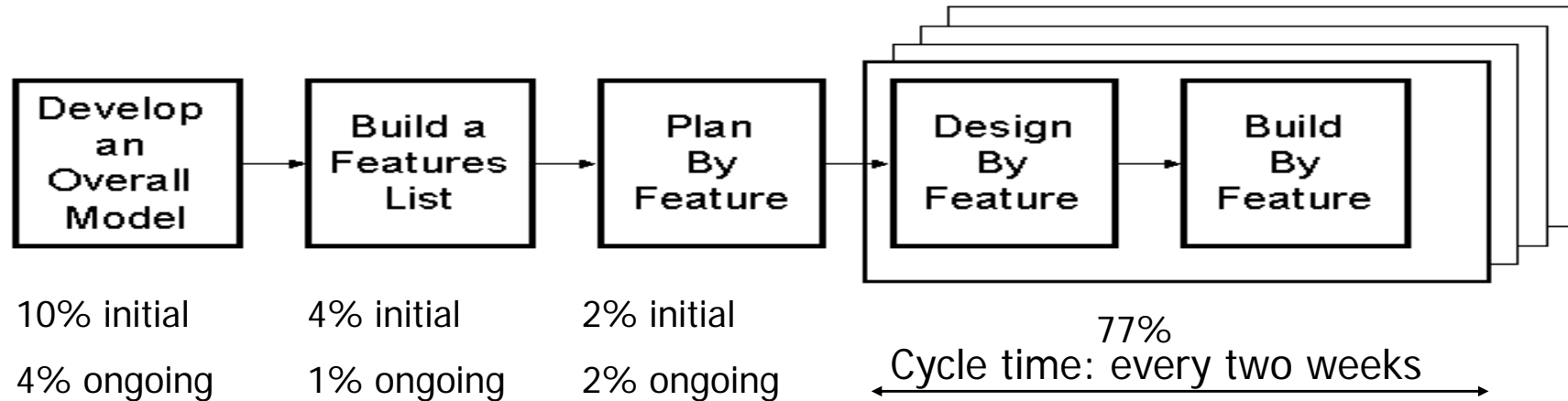
# Integration and Deployment: Supporting Roles

## ■ Three supporting roles:

- **Release Manager:** ensures Chief Programmers report progress on what has been 'released' into the build at regular intervals, e.g. every week.
- **Build Manager:** responsible for setting up, and maintaining the smooth running of a regular build process.
  - This includes managing the version control system, publishing any generated reports or documentation, and writing any build or deployment scripts.
- **Deployer:** convert existing data to the new formats required by the new system and work on the physical deployment of new releases of the system.



# Project Management: Relative Time



[Palmer and Felsing 2002]

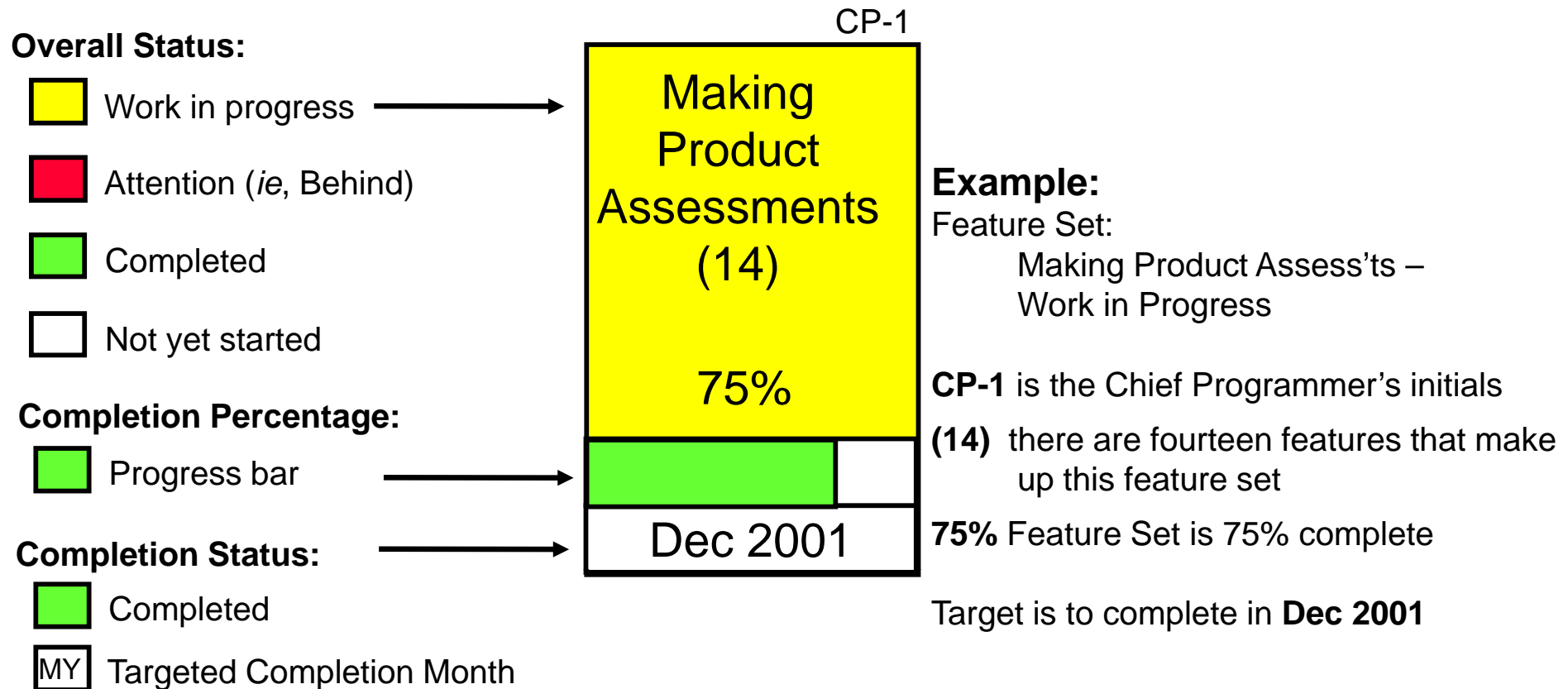


# Project Management: Monitoring and Reporting

- Simple, low-overhead methods are used for collecting accurate and reliable status information.
- A number of straightforward, intuitive report formats are suggested for reporting progress.
- The release manager meets weekly with the chief programmers in a 30-minutes-or-less meeting
  - Each chief programmer verbally walks through the status of his features, marking up the project-tracking chart as he goes.
  - At the end of the meeting, the release manager takes those results, updates the database, and generates reports.
- The release manager issues progress reports weekly, for the team and for clients and senior management.



# Project Management: Progress Reporting – Feature Sets

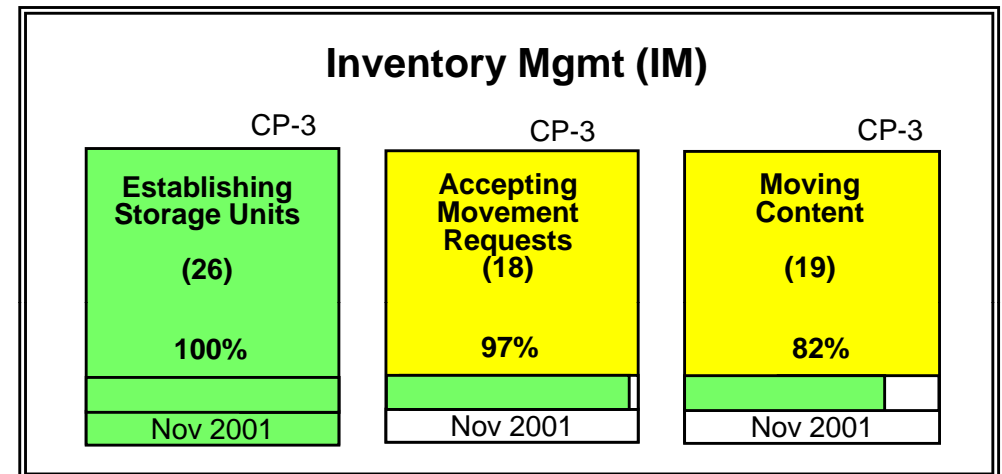
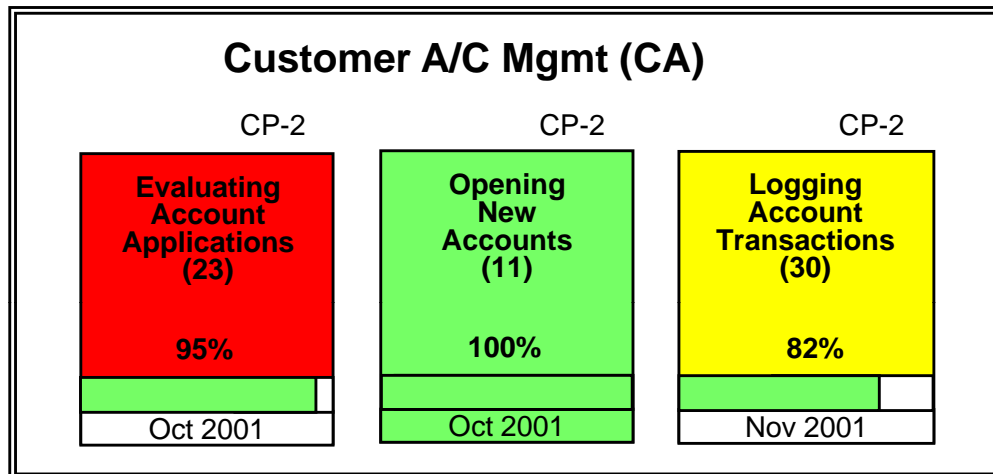
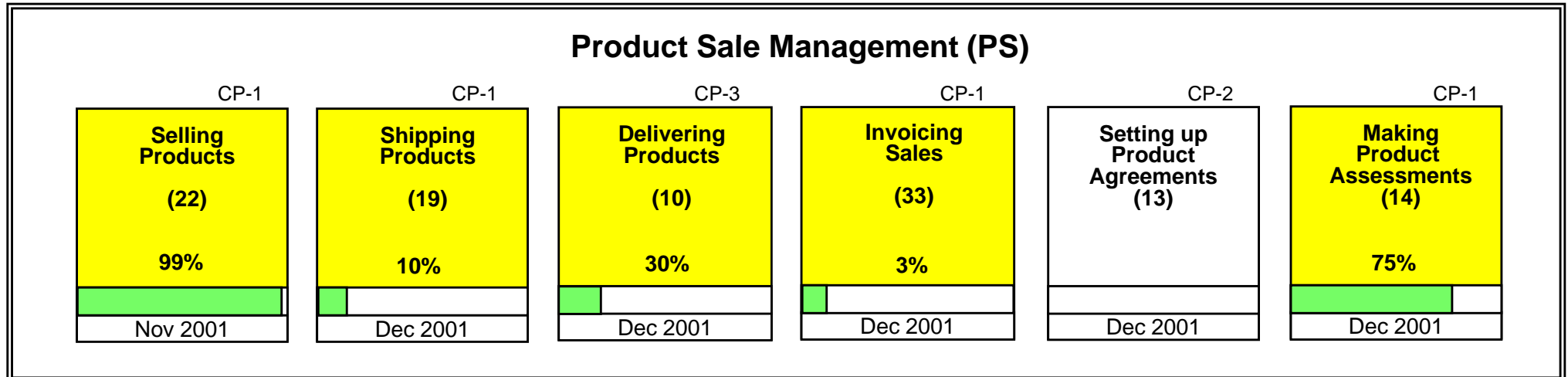


[Palmer and Felsing 2002]





# Project Management: Progress Reporting Major Feature Sets



KEY:   Work In Progress   Attention   Completed   Progress Bar   Not Started

[Palmer and Felsing 2002]



# Project Management: Plan View Report

## Authorisation (9)

Id	Description	Chief Prog.	Class Own.	Walkthrough		Design		Design Inspection		Code		Code Inspection		Promote to Build	
				Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual	Plan	Actual
MD125	validate the transactional limits of a CAO against an implementation instruction	CP	ABC	23/12/98	23/12/98	31/01/99	31/01/99	01/02/99	01/02/99	10/02/99			18/02/99		20/02/99
MD126	set the status of an implementation instruction	CP	ABC	23/12/98	23/12/98	31/01/99	31/01/99	01/02/99	01/02/99	10/02/99			18/02/99		20/02/99
MD127	specify the authorising officer of an implementation instruction	CP	ABC	23/12/98	23/12/98	31/01/99	31/01/99	01/02/99	01/02/99	10/02/99			18/02/99		20/02/99
MD128	reject an implementation instruction authorisation for a set of lines	CP	ABC	STATUS: Inactive REMARKS: [added by CK: 3/2/99] No longer applicable											
MD129	confirm an implementation instruction authorisation for a set of lines	CP	ABC	23/12/98	23/12/98	31/01/99	31/01/99	01/02/99	01/02/99	10/02/99			18/02/99		20/02/99
MD130	determine if all documents are completed for a borrower	CP	ABC	23/12/98	23/12/98	31/01/99	31/01/99	01/02/99	01/02/99	05/02/99			08/02/99		10/02/99
MD131	validate the transactional limits of a CAO against a disbursement instruction	CP	ABC	23/12/98	23/12/98	31/01/99	31/01/99	01/02/99	01/02/99	05/02/99			08/02/99		10/02/99
MD132	submit for authorisation an implementation instruction	CP	ABC	23/12/98	23/12/98	31/01/99	31/01/99	01/02/99	01/02/99	05/02/99	05/02/99	06/02/99	06/02/99	08/02/99	08/02/99
MD133	validate the drawdown date of an implementation instruction	CP	ABC	23/12/98	23/12/98	31/01/99	31/01/99	01/02/99	01/02/99	05/02/99	05/02/99	06/02/99	06/02/99	08/02/99	08/02/99

Progress sum for these features in feature set "Authorisation": 55%

Expected completion date: Mar 1999

[Palmer and Felsing 2002]



# Project Management: Feature View Report

Id	Major Feature Set	Feature Set	Description	Chief Prog.	Owners
<a href="#">AR044</a>	Establish Application (AR)	Abort Application	determine <i>whether update is allowed for an AFL</i>	John Doe	Sally Brown
<a href="#">AR045</a>	Establish Application (AR)	Abort Application	set <i>abort reason and remarks information AFL</i>	John Doe	Sally Brown
<a href="#">AR046</a>	Establish Application (AR)	Abort Application	set <i>status equal to aborted for an AFL</i>	John Doe	Sally Brown
<a href="#">AR025</a>	Establish Application (AR)	Comply with MAS	determine <i>whether MAS S27 rules apply for an AFL</i>	Ron Wood	Sally Brown
<a href="#">AR026</a>	Establish Application (AR)	Comply with MAS	determine <i>whether MAS S757 rules apply for an AFL</i>	Ron Wood	Sally Brown
<a href="#">AR027</a>	Establish Application (AR)	Comply with MAS	Determine <i>foreigner status of an individual</i>	John Doe	Jchn Doe, Jim Talbot, Lisa Kenny
<a href="#">AR028</a>	Establish Application (AR)	Comply with MAS	determine <i>foreign ownership status of an Organisation</i>	John Doe	Jchn Doe, Jim Talbot, Lisa Kenny
<a href="#">AR029</a>	Establish Application (AR)	Comply with MAS	determine <i>whether MAS S34 rules apply for an AFL</i>	Ron Wood	Sally Brown, Ron Wood
<a href="#">AR004</a>	Establish Application (AR)	Create Application	Copy <i>the registration details of an AFL</i>	John Doe	Sally Brown
<a href="#">AR005</a>	Establish Application (AR)	Create Application	create <i>new AFL for party</i>	Fred Smith	Jchn Doe, Sally Brown

[Palmer and Felsing 2002]



# Project Management: Weekly Summary Report

Progress Overview for Problem Domain								
<b>Establish Application (AR)</b>								
Feature Sets	Total Features	Not Started	In Progress	Behind Schedule	Completed	Inactive	% Completed	Completion Date
Abort Application	3	0	0	0	3	0	100	May 1998
Comply with MAS	5	0	0	0	5	0	100	Aug 1998
Create Application	14	0	0	0	14	0	100	May 1998
New Feature	1	0	0	0	1	0	100	Ongoing
Register Application	14	0	0	0	14	4	100	May 1998
Search for AFL	3	0	0	0	3	0	100	May 1998
Validate AFL	7	0	0	0	7	1	100	May 1998
<b>Subject Area Total</b>	<b>47</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>47</b>	<b>5</b>	<b>100</b>	
<b>Establish Approval (AA)</b>								
Feature Sets	Total Features	Not Started	In Progress	Behind Schedule	Completed	Inactive	% Completed	Completion Date
Approving an AFL	22	0	0	0	22	0	100	Oct 1998
Comply with Credit Policy	19	0	0	0	19	0	100	Oct 1998
Comply with MAS HLD	10	0	0	0	10	0	100	Oct 1998
Comply with MAS S29	33	0	0	0	33	5	100	Oct 1998
Comply with MAS S34	3	0	0	0	3	0	100	Oct 1998
Comply with MAS S757	4	0	0	0	4	1	100	Oct 1998
Establish CLS User	13	0	0	0	13	0	100	May 1998
Generate CAS	85	0	0	0	85	15	100	Oct 1998
New Feature	28	0	0	0	28	0	100	Ongoing
Routing for Approval	18	0	0	0	18	0	100	Sep 1998
<b>Subject Area Total</b>	<b>235</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>235</b>	<b>21</b>	<b>100</b>	
<b>Implementation (MD)</b>								
Feature Sets	Total Features	Not Started	In Progress	Behind Schedule	Completed	Inactive	% Completed	Completion Date
Authorisation	15	0	0	13	2	2	51	Mer 1999
Change Current Account for OD Line	12	12	0	0	0	0	0	Mer 1999
Establish Disbursement Details	35	0	0	4	31	1	91	Mer 1999
Establish Implementation Instruction	27	1	0	12	14	1	70	Mer 1999
Establish Line Implementation Details	21	0	0	4	17	0	89	Mer 1999
Establish a Loans, H?, Leasing Loans, Block Discounting Line Impl.	7	0	0	0	7	0	100	Mer 1999
Establish a NIF RL Disbursement	8	6	0	0	2	1	25	Mer 1999
Establish a Trade or Gtee Line Implementation	9	0	0	0	9	0	100	Mer 1999
Establish an FX Line Implementation	5	0	0	0	5	0	100	Mer 1999
Establish an OD Line Implementation	13	0	0	0	13	0	100	Mer 1999
New Feature	3	0	0	0	3	0	100	Ongoing
<b>Subject Area Total</b>	<b>155</b>	<b>19</b>	<b>0</b>	<b>33</b>	<b>103</b>	<b>5</b>	<b>74</b>	
<b>Progress Summary for Problem Domain</b>								
	Total Features	Not Started	In Progress	Behind Schedule	Completed	Inactive	% Completed	
	<b>1013</b>	<b>23</b>	<b>0</b>	<b>33</b>	<b>957</b>	<b>100</b>	<b>96</b>	

[Palmer and Felsing 2002]



# Configuration Management

- A Configuration Management system is set up in order to
  - keep requirements documents, in whatever form they take, under version control so that a change history is maintained.
  - identify the source code for all the features that have been completed to date.
  - maintain a history of changes to classes as feature teams enhance them.
  
- Managers:
  - **Features:** Domain Manager – leads the domain experts in larger teams and is also responsible for resolving differences in opinions about requirements.
  - **Source Code:** Build Manager



# Quality Assurance

## ■ Iterative Inspections:

- Design
- Code
- Plans

## ■ Process Verification Activities

- ETVX Process Template (Entry-Tasks-Verification-Exit) defines the verification activities to be performed for each of the five processes.

- **Process Review:** performed by Project Manager and Development Manager; mostly limited to DBF/BBF.



# Reference

- Palmer, S. R., Felsing, J. M., *A Practical Guide to Feature-Driven Development*. Prentice-Hall, 2002.