

The slide features several decorative circles in a light purple color. One circle is empty and positioned behind the word 'Ready'. Another circle is partially behind the word 'External'. A third circle is behind the word 'Audit?'. In the lower section, there are three circles: one is solid purple and positioned behind the name 'Carolyn Rodda', another is solid purple and behind 'Lincoln', and the third is an empty circle behind 'Catapult Technology'.

# Are You Ready for an External Audit?

Carolyn Rodda Lincoln  
Catapult Technology

# Agenda

- Context
- Measure
- Artifacts
- Benefits



® CMMI is a registered in the United States Patent and Trademark Office by Carnegie Mellon University



# Context

- External Audit is x months away
  - CMMI®
  - ISO 9001:2000
  - ISO 20000:2005
- Senior management wants to know if you are ready (or when you will be ready)
- Projects seem to be implementing standard/model

# Context (cont)

- Must gather and index artifacts
  - ISO compliance matrix
  - Process Implementation Indicator Database (PIID) for CMMI®
- Artifacts are everywhere
  - Intranet
  - Project shared drives
  - CM tools
- Now what do you do?



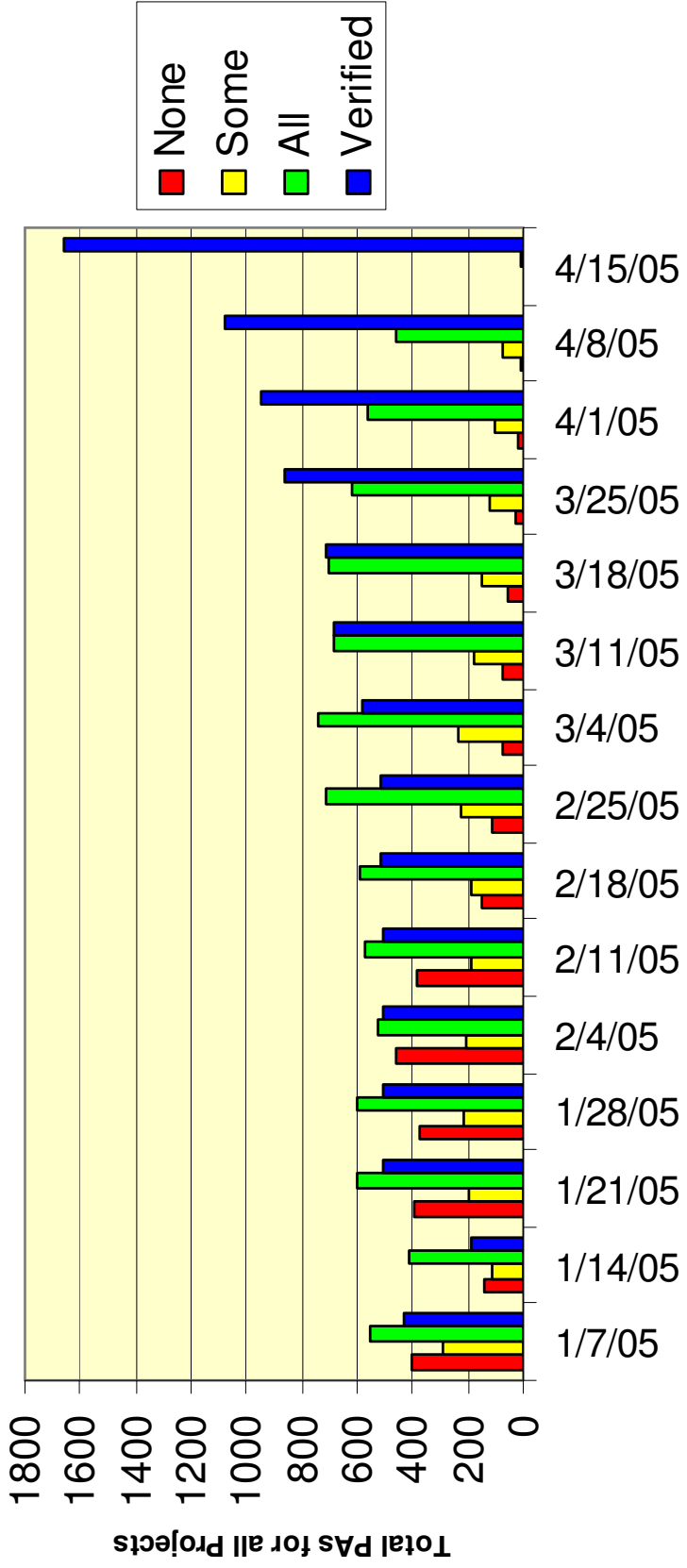
# Measure

A decorative graphic consisting of two groups of three circles. The first group on the left has a solid light purple circle, a white circle with a light purple outline, and another solid light purple circle. The second group on the right has a solid light purple circle, a white circle with a light purple outline, and another solid light purple circle.

- Show progress by percent complete on gathering and verifying artifacts
- Estimate audit readiness by modeling trend
- Store artifacts in central location
- Hyperlink artifacts to mapping spreadsheet

# Measure (cont)

Summary CMMI Compliance



# Measure (cont)

- Goal is to have all “blue’s”
- Graph shows actual progress
- Can also model planned progress

Time	Max Red	Max Yellow	Max Green	Max Blue
Audit – 4 months	20%	25%	30%	25%
Audit – 3 months	15%	20%	20%	45%
Audit – 2 months	5%	10%	20%	65%
Audit – 1 month	0%	0%	10%	90%

## Measure (cont)

- Lack of planned progress can encourage participation
- Ideally, have all “blue’s” a month before audit
  - Need to do one last check
  - May need to copy to an auditor’s preferred format
  - Need to prepare interviewees



# Artifacts



- Create mapping document

- Text of model or standard – can be in form of statement or question
- Applicable process to satisfy
- Typical evidence
- Actual artifacts for project
- Status

**Template**

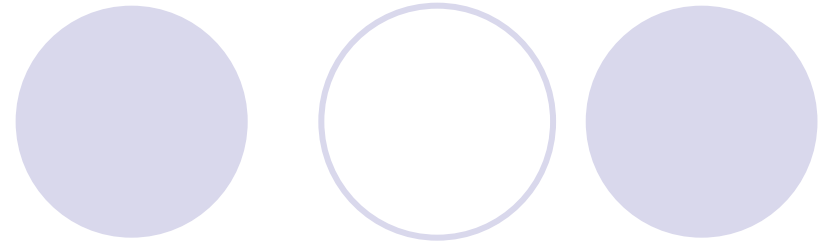
# Artifacts (cont)

## CMMI® Example

Practice	Text	Process	Typical Direct	Typical Indirect	Status
GP 2.4	Assign responsibility and authority for performing the process, developing the work products, and providing the services of this PA's process	Project planning process	Project plan roles and responsibilities , work authorization	Org chart with names, contact list with roles	Green

Would have actual evidence before status column

# Artifacts (cont)



## ISO 9001:2000 Example

Standard	Process	Typical Evidence	Status
Is our Quality Management System maintained?	Quality Manual	Change control log for Quality Manual	Green

Would have actual evidence before status column

# Artifacts (cont)



- Establish a location for artifacts
  - Only for external audit
  - Organized for ease of audit
  - Subfolders for recurring items such as status reports
- As find evidence, move artifacts to audit location
- Hyperlink them to mapping document

# Artifacts (cont)

- Artifact work can be done by projects or QA
  - For initial audit, projects participate
  - For later external audits, QA updates mapping as part of internal audits
    - May replace older version of same document
    - May add to recurring
  - QA always does verification

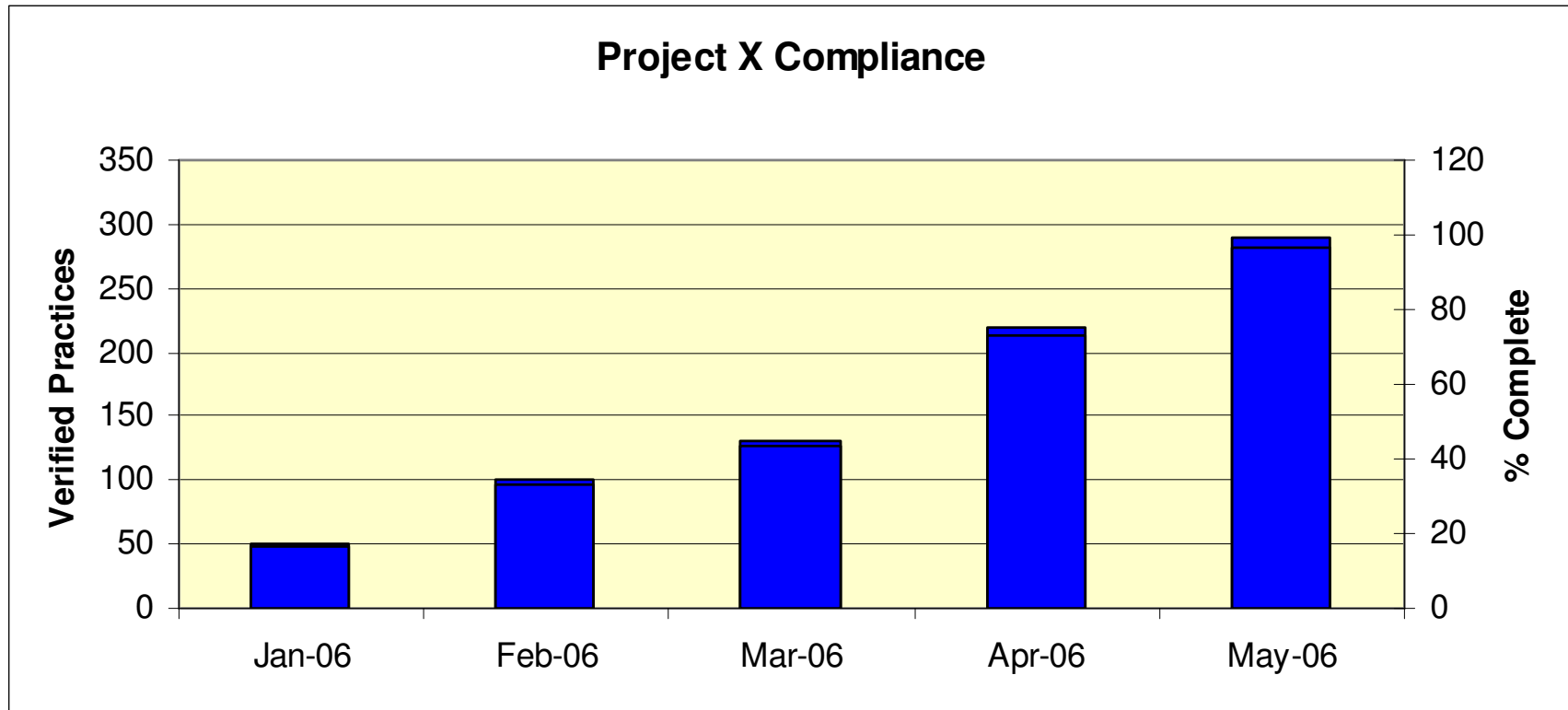
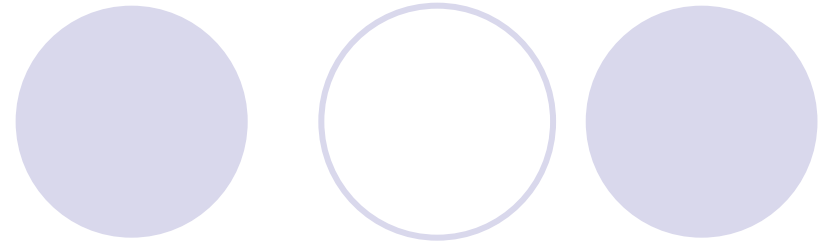


# Artifacts (cont)

- Count number of each status
- Display on graph
  - Number per process area / section of standard
  - % complete
    - Process area / section
    - Project
    - Across all projects
  - Shows trends over time
    - Week
    - Month



# Artifacts (cont)



# Benefits

- Demonstrate progress

- Encourage projects

- Locate artifacts
- See gaps
- Create them as needed

- Show status to management

- Forecast “ready” date

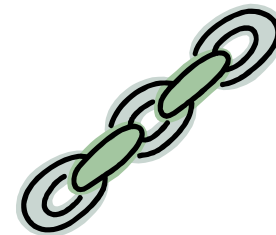




# Benefits (cont)

- Artifact Mapping

- No value to the project – only for external audit
- Less onerous if done continuously with internal audits
- As QA locates artifacts for internal audit,
  - Copy or replace in audit location
  - Update hyperlink



# Benefits (cont)

- Mapping is VERY time-consuming
  - CMMI® - about 300 practices in levels 2-3
  - ISO 9001:2000 – about 270 clauses
  - Estimate 30 minutes per practice/clause per project
  - 150 hours or 19 staff-days per project
  - It ISN'T fun!!!





**QUESTIONS?**