CMMI Today: The Current State

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Outline

Introduction

CMMI V1.1 Appraisal-to-date Synopsis

CMMI Transition Status

CMMI Website Statistics

CMMI Current Activities

CMMI Future Plans

CMMI Training

Summary

Introduction

Characterize the adoption of CMMI

Provide a first look at the results from the Standard CMMI Appraisal Method for Process Improvement (SCAMPI^{SM} V1.1) Class A appraisal method using Capability Maturity Model Integration (CMMI) V1.1 *

Provide latest information on CMMI current activities

Discuss future planning for the CMMI Product Suite

* Organizations previously appraised against CMMI V1.0 that have not reappraised against V1.1 are not included in this report.

Please visit http://www.sei.cmu.edu/sema/profile_about.html for additional information or questions you may have about this briefing before contacting the SEI directly.

Current Appraisal Synopsis

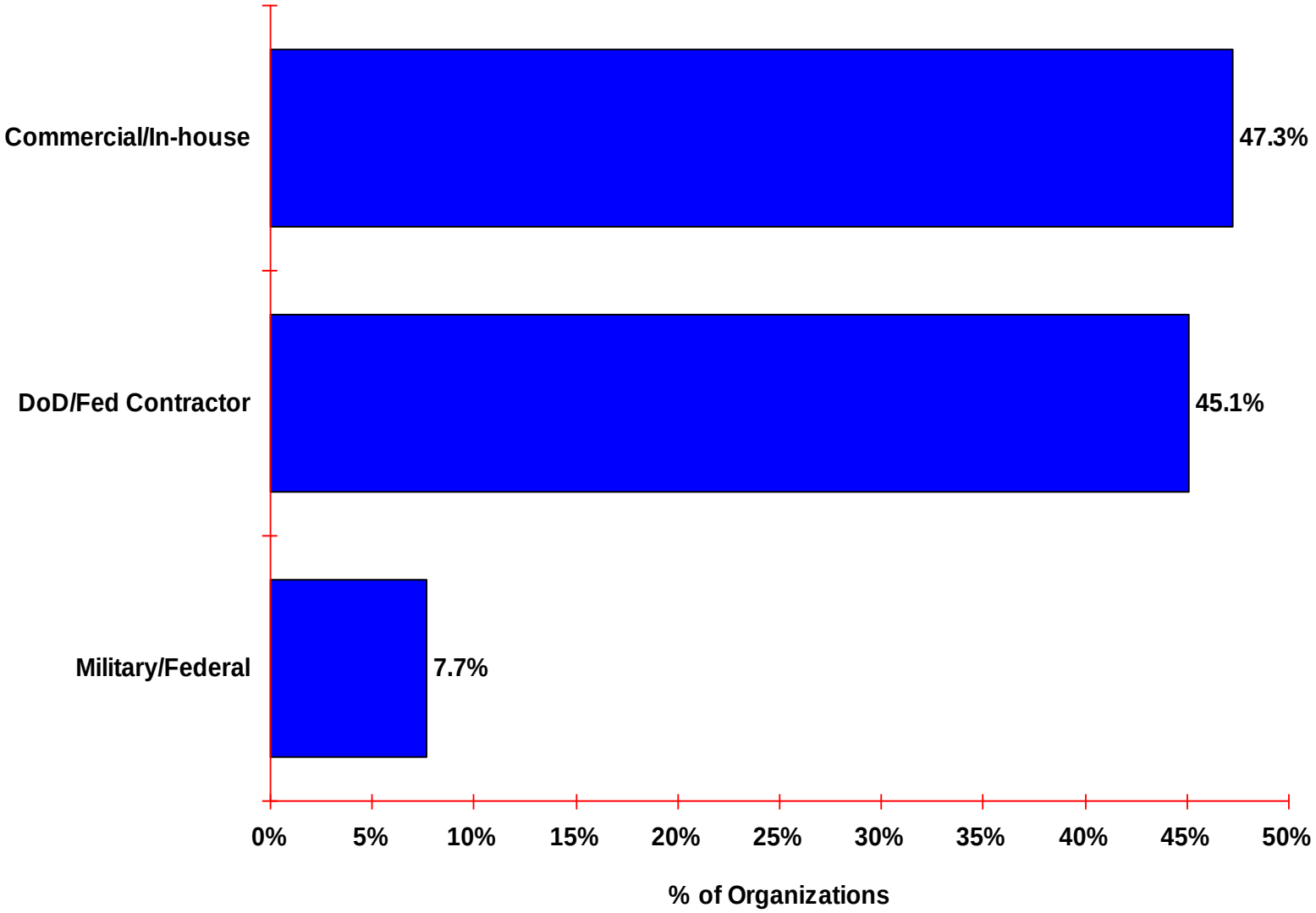
Based on SCAMPI V1.1 appraisals conducted since April 2002 release through June 2003 and reported to the SEI by July 2003

- **100 appraisals**
- **93 organizations**
- **52 participating companies**
- **6 reappraised organizations**
- **357 projects**
- **54% offshore organizations**

Please refer to "Terms Used in this Report" on page 20.

Additional charts providing different views and breakdowns of this information will be added to this briefing as more of these types of appraisals are reported to the SEI over time.

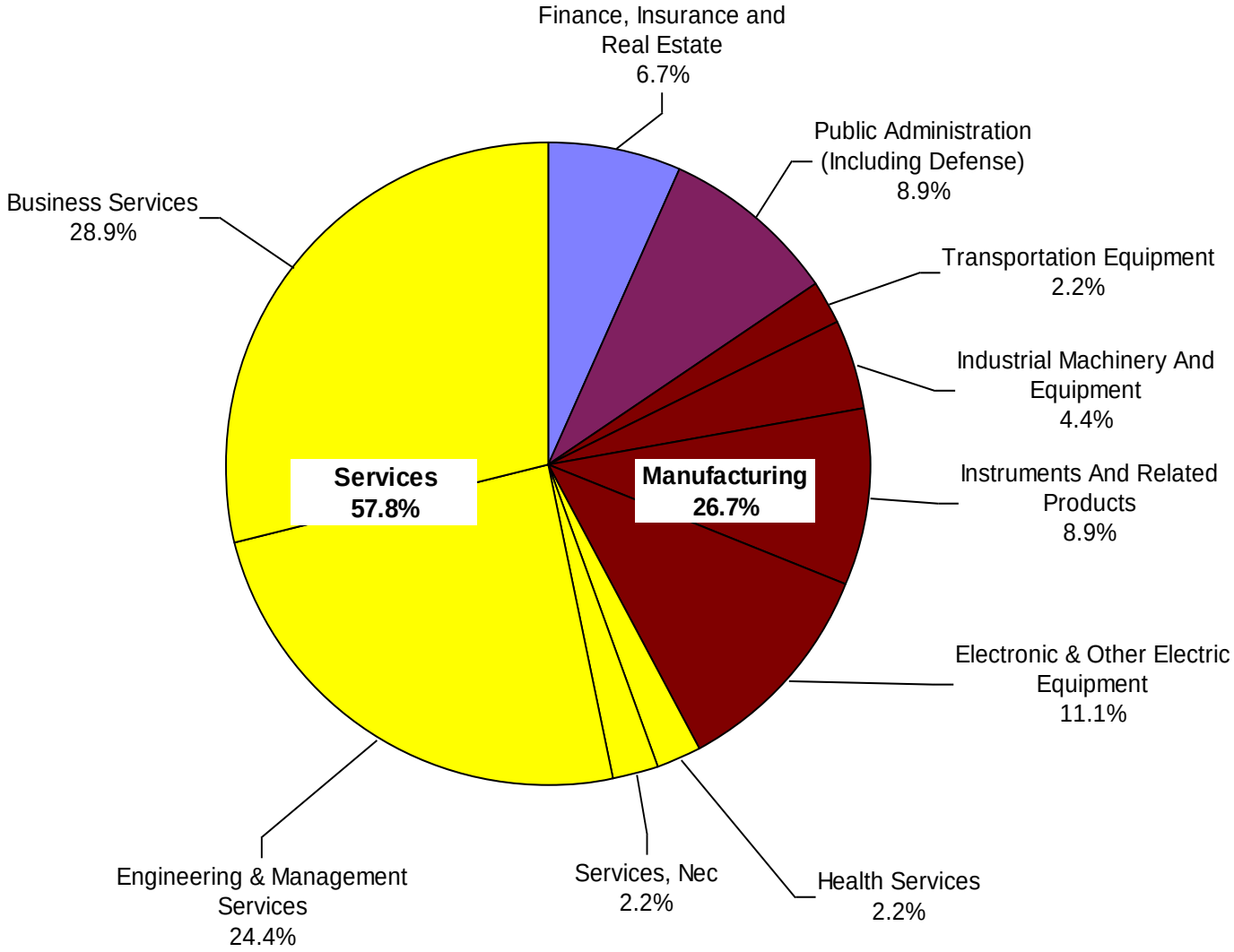
Reporting Organizational Types



Based on **91** organizations

Types of Organizations

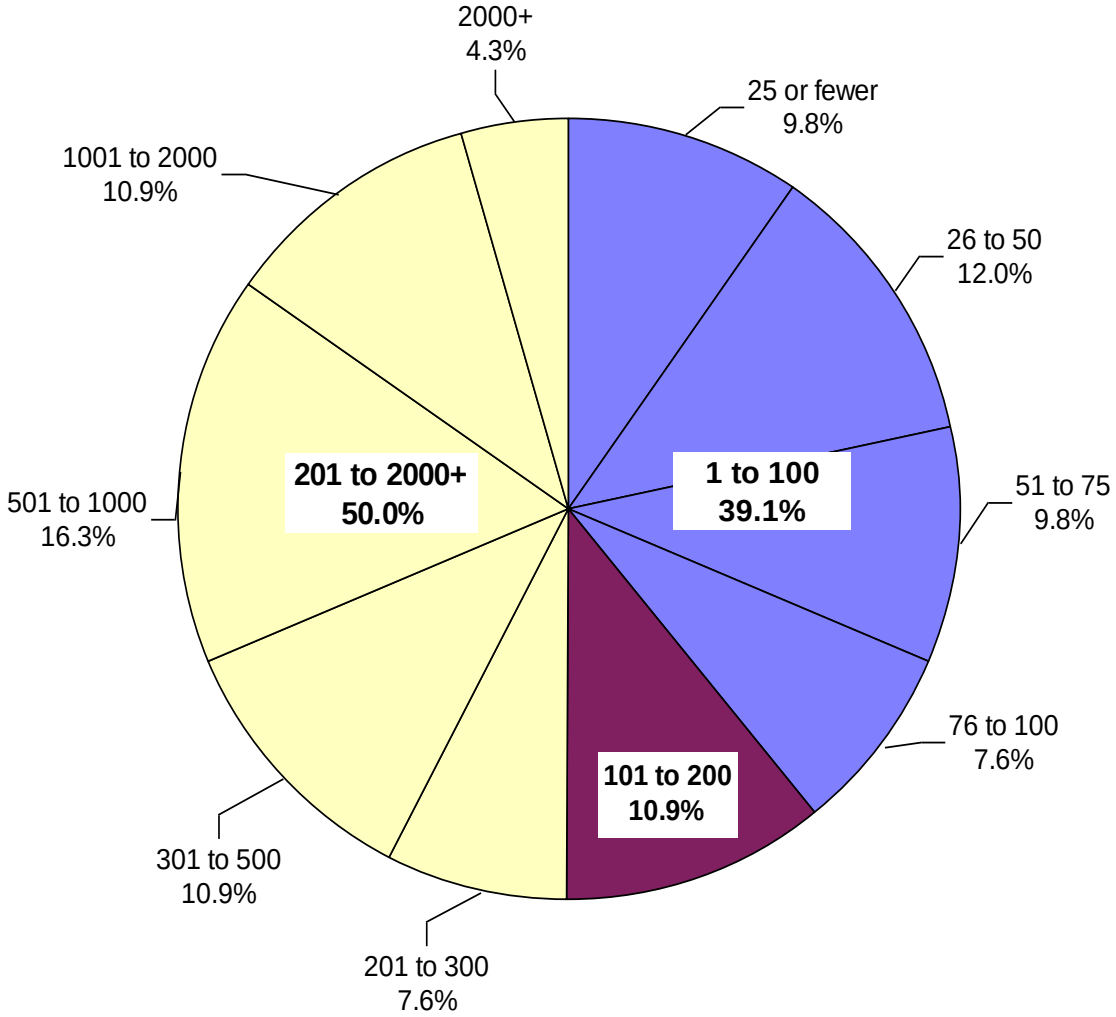
Based on Primary Standard Industrial Classification (SIC) Code



Based on **45** organizations reporting SIC code. For more information visit: http://www.osha.gov/oshstats/sicser.html

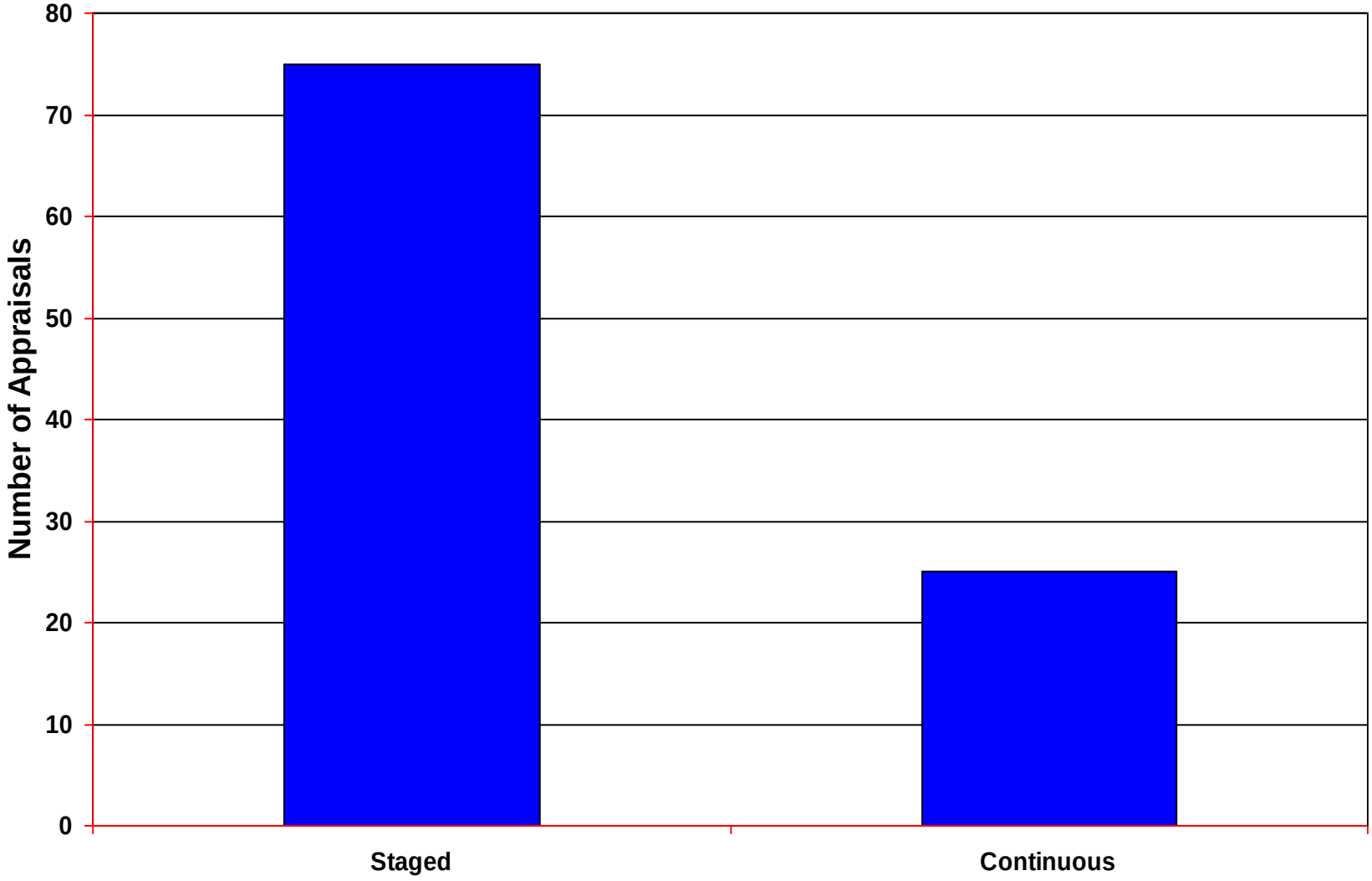
Organizational Size

Based on the total number of employees within the area of the organization that was appraised



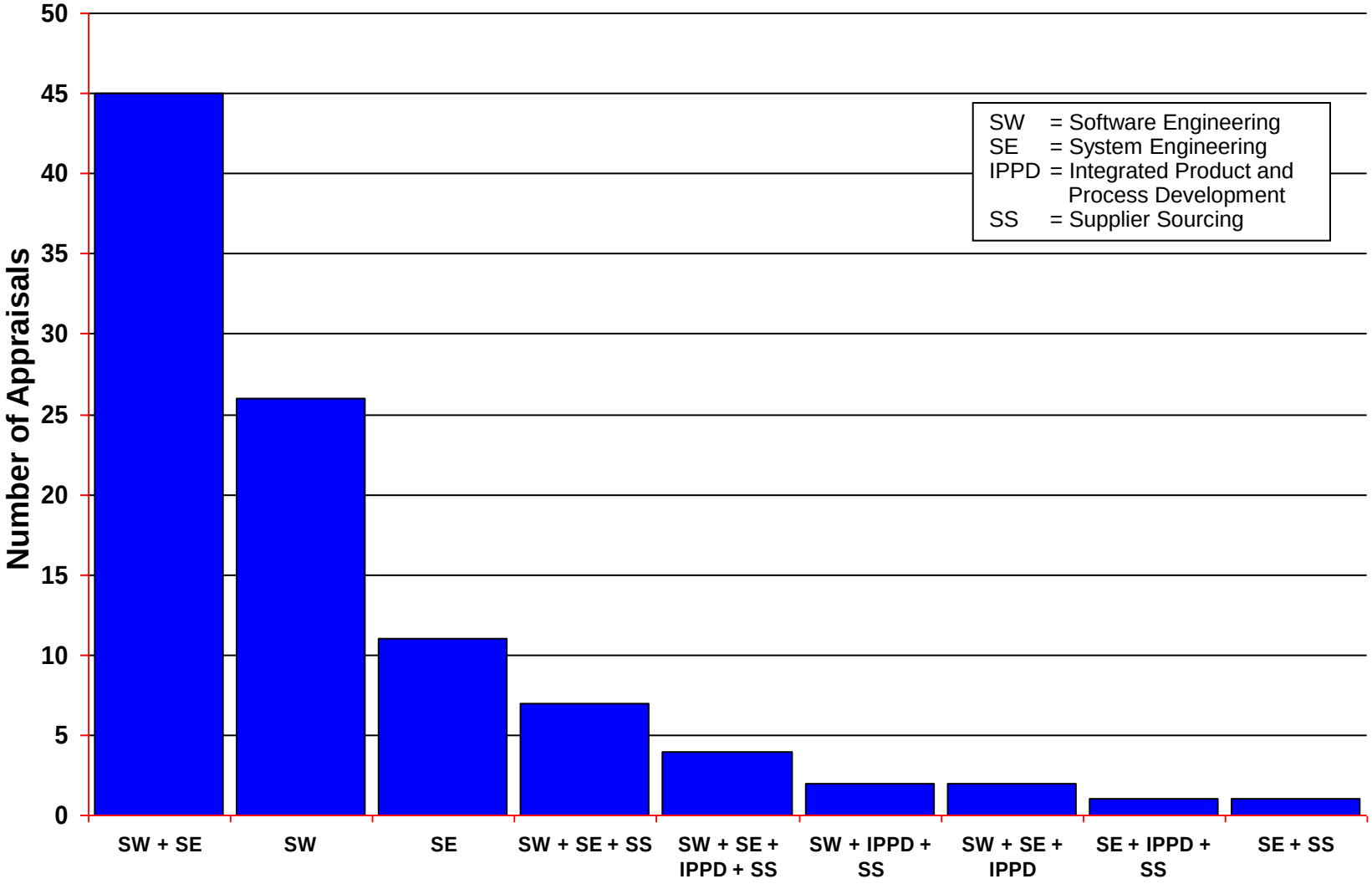
Based on **92** organizations reporting size data

Use of Model Representations in Appraisals



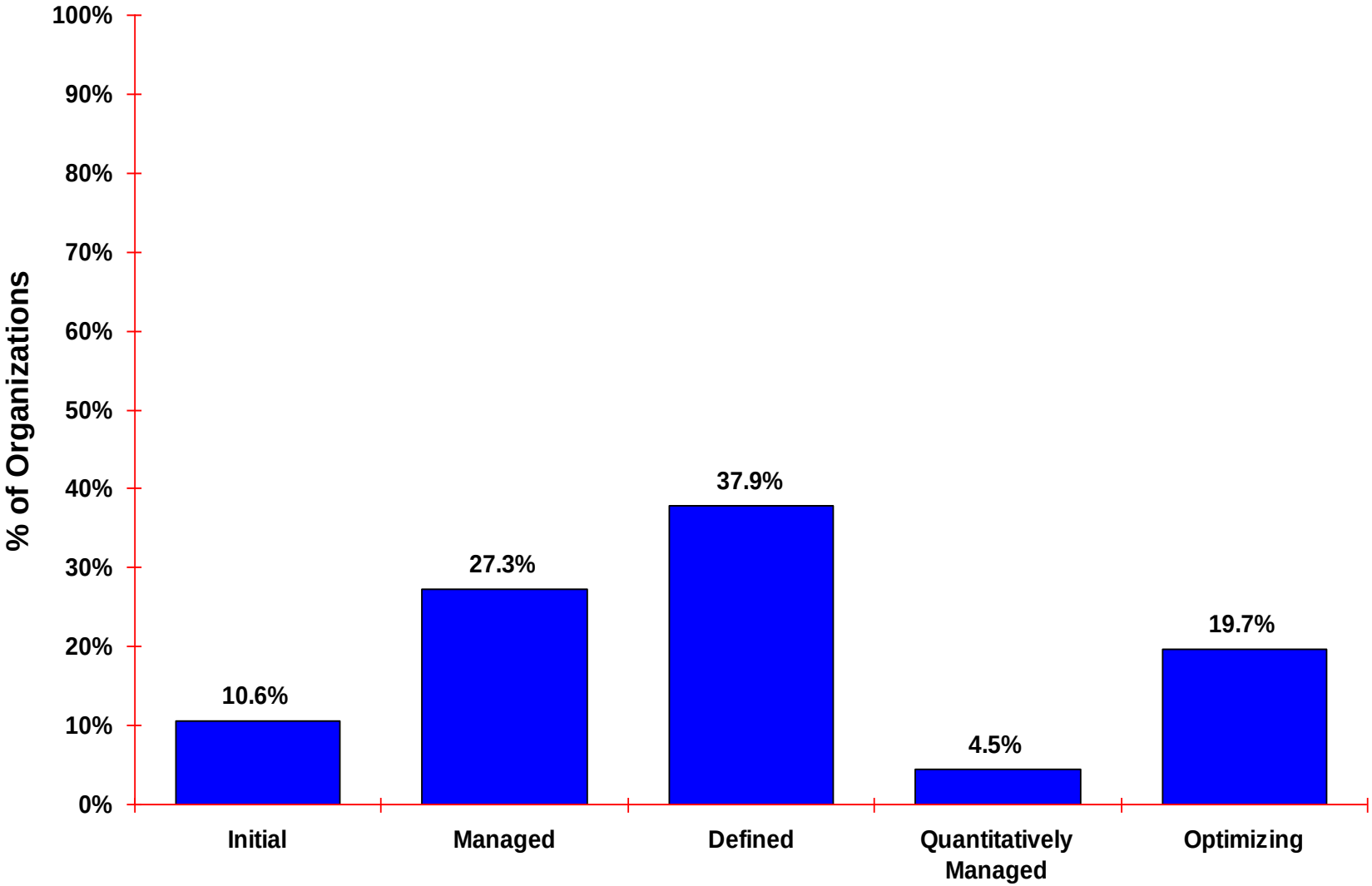
Based on **100** appraisals

Disciplines Selected for Appraisals



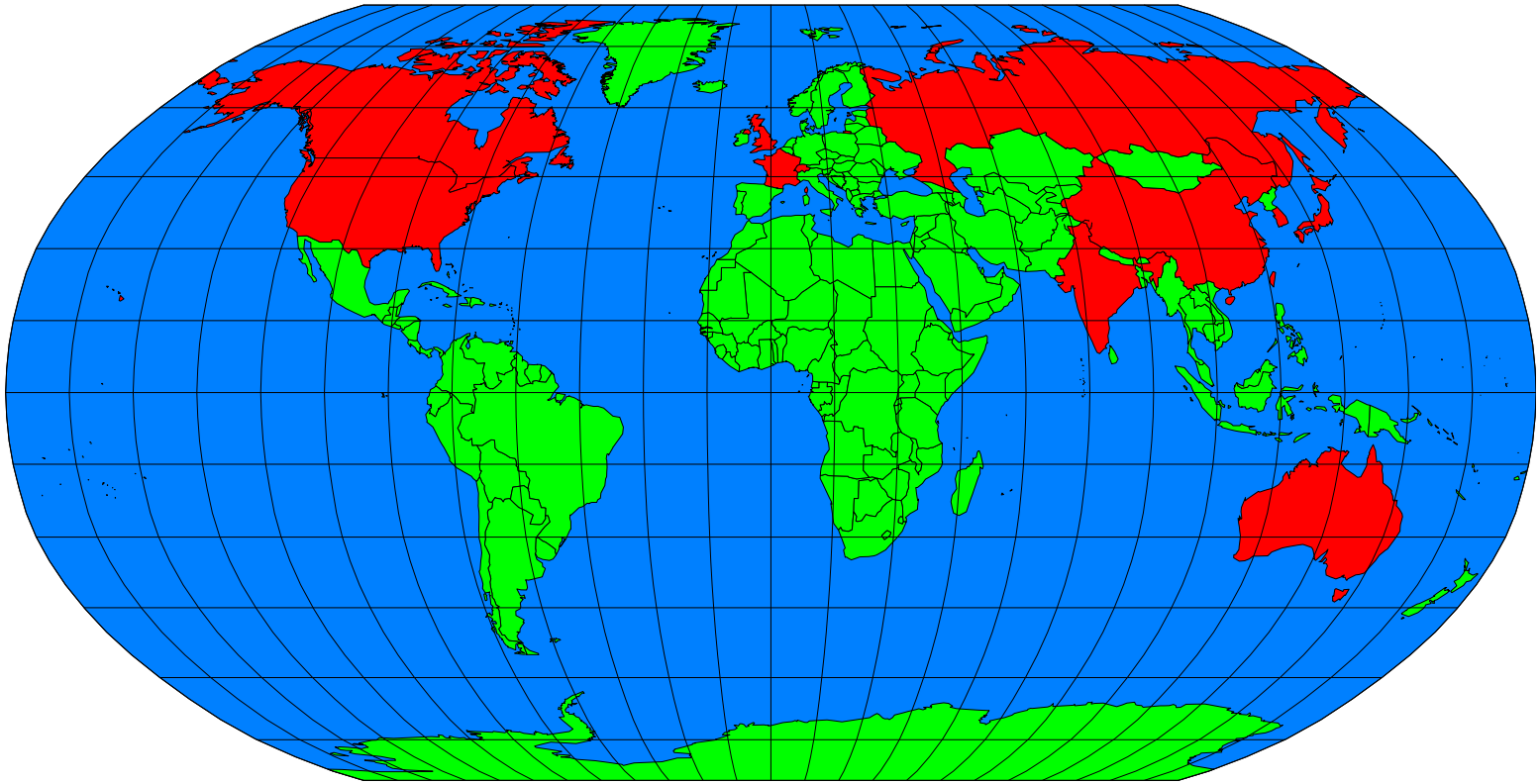
Based on **99** appraisals reporting coverage

Summary Organizational Maturity Profile



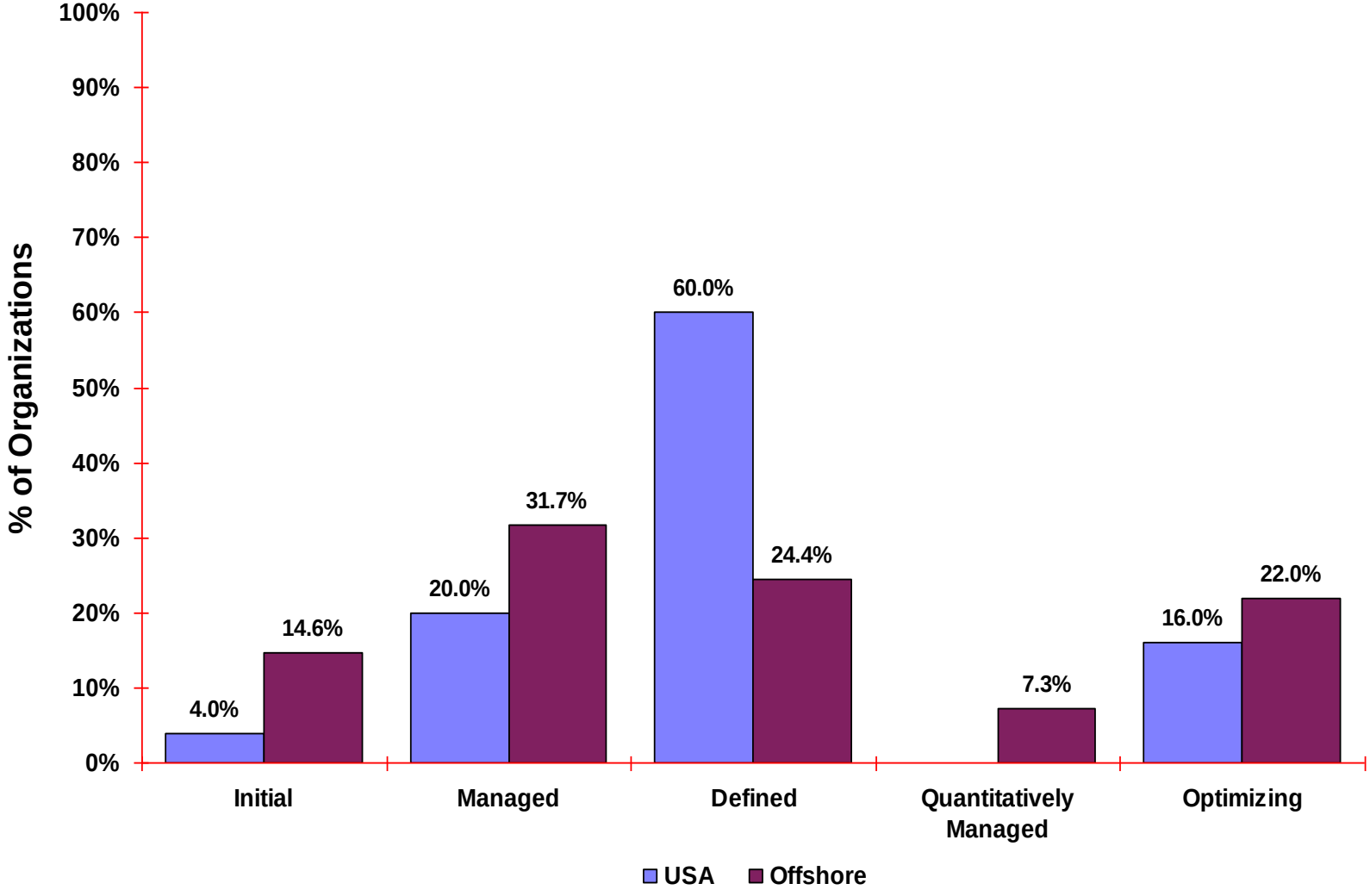
Based on most recent appraisal of **66** organizations reporting a maturity level rating

Countries Where Appraisals Have Been Performed and Reported to the SEI

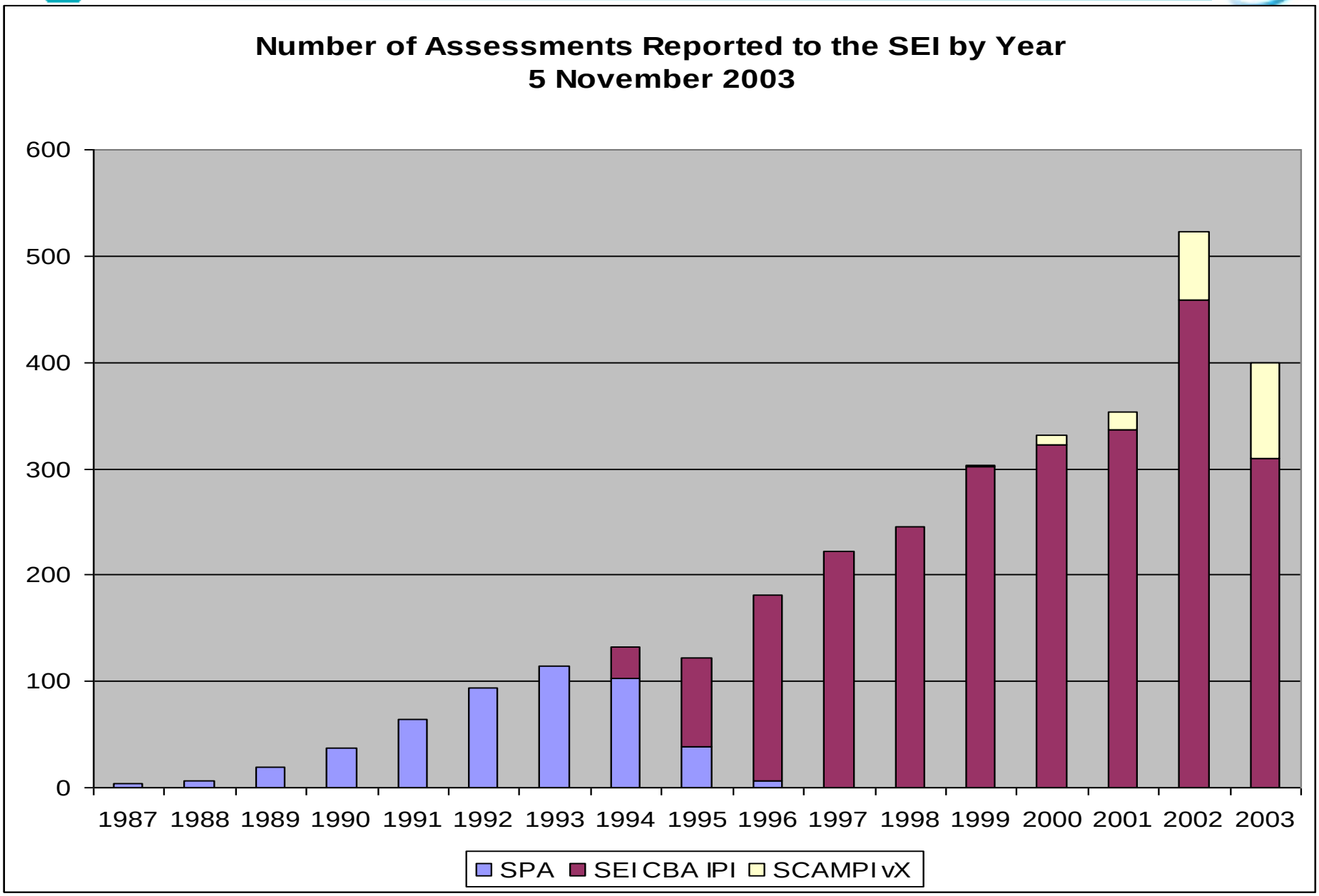


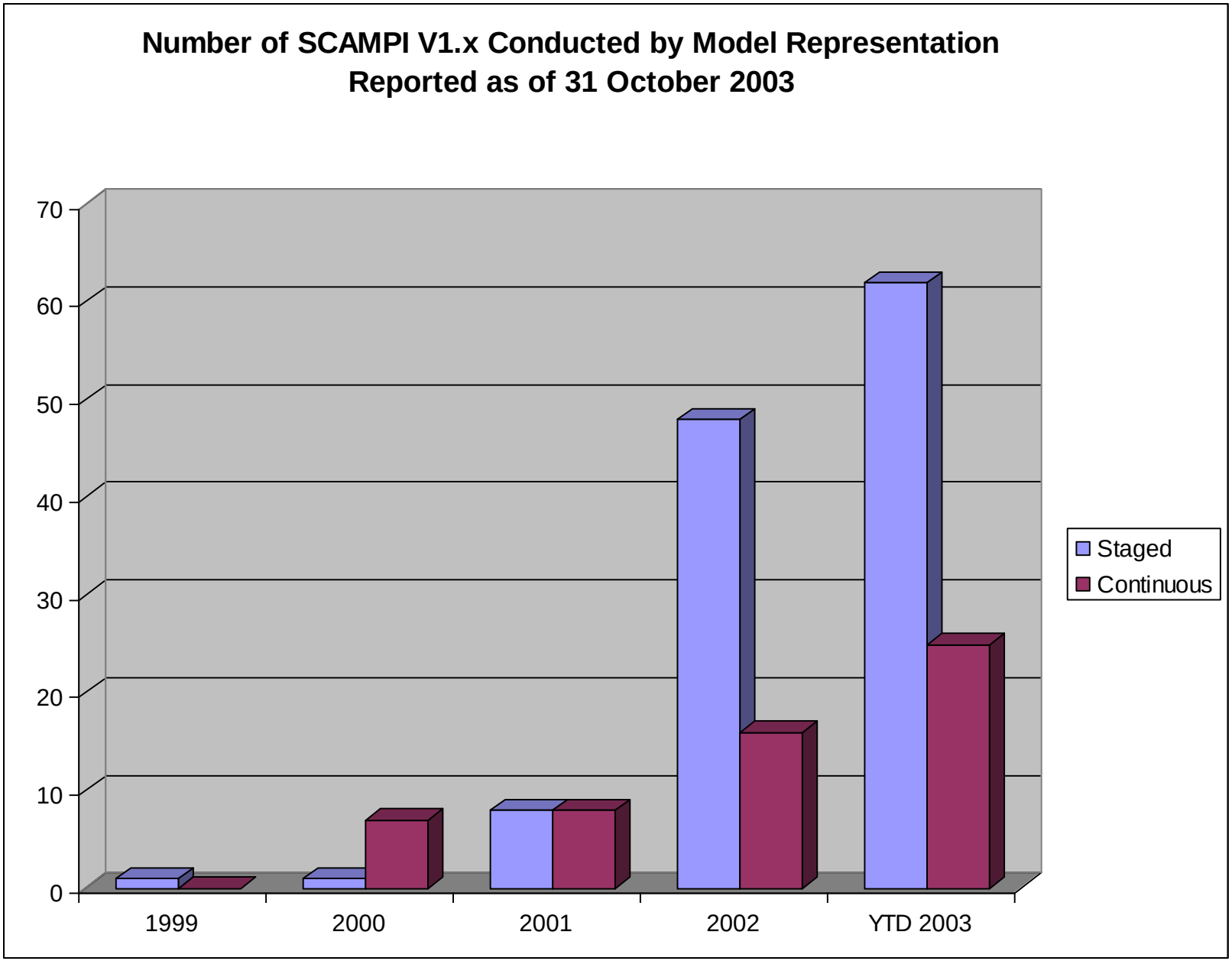
Australia	Canada	China	France	India	Japan
Korea, Republic of	Russia	Switzerland	Taiwan	United Kingdom	United States

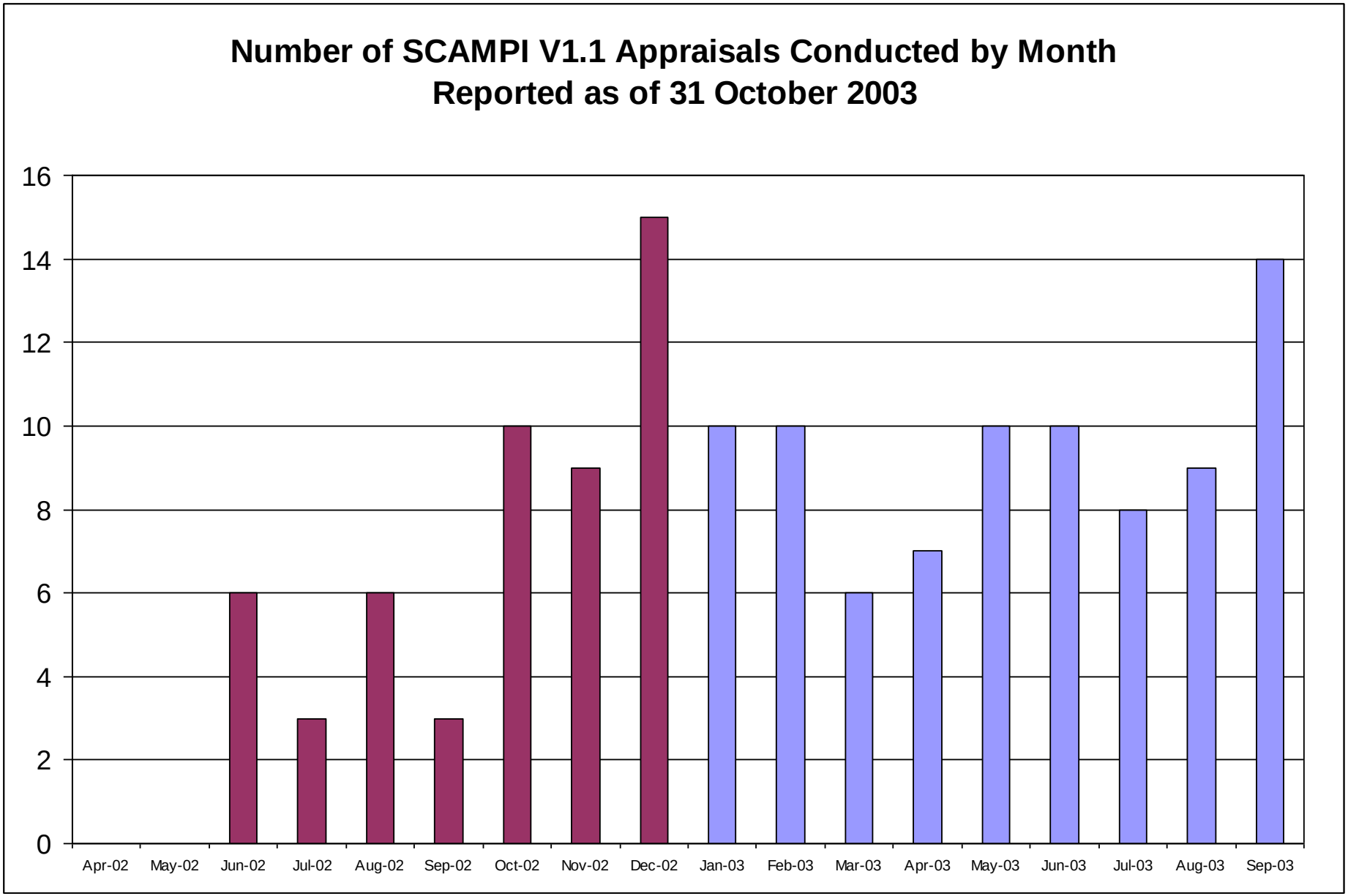
USA and Offshore Summary Organizational Maturity Profiles



Based on **25** U.S. organizations and **41** offshore organizations reporting their maturity level rating


Number of Assessments Reported to the SEI by Year
5 November 2003
600
500
400
300
200
100
0
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
SPA
SEI CBA IPI
SCAMPI vX


Number of SCAMPI V1.x Conducted by Model Representation
Reported as of 31 October 2003
70
60
50
40
30
20
10
0
1999
2000
2001
2002
YTD 2003
Staged
Continuous


Number of SCAMPI V1.1 Appraisals Conducted by Month
Reported as of 31 October 2003
16
14
12
10
8
6
4
2
0
Apr-02
May-02
Jun-02
Jul-02
Aug-02
Sep-02
Oct-02
Nov-02
Dec-02
Jan-03
Feb-03
Mar-03
Apr-03
May-03
Jun-03
Jul-03
Aug-03
Sep-03

Appraisal Results Summary

100 appraisals have been reported to the SEI in the 13 months since the April 2002 release of the SCAMPI Class A Version 1.1 appraisal method for CMMI Version 1.1.

There is relatively even reporting from the commercial and DoD contractor communities.

Of U.S. organizations, the services and manufacturing industries reported the most appraisals.

Compared to the early reports of the SW-CMM maturity profile, the early data reflects a relatively more mature CMMI profile.

Additional information and charts will be added to this briefing as more appraisals are reported and more data is therefore available to support these breakdowns.

Dave Zubrow (SEI) will be providing more detailed information on appraisal results on Tuesday afternoon, Session 2D2.

Terms Used in this Synopsis

Company - Parent of the appraised entity
A company can be a commercial or non-commercial firm, for-profit or not-for-profit business, a research and development unit, a higher education unit, a government agency, branch of service, etc.

Organization - Appraised entity
The organization unit to which the appraisal results apply. An appraised entity can be the entire company, a selected business unit, units supporting a particular product line or service, etc.

Offshore - Appraised entity whose geographic location is not within the United States. The parent of an offshore entity may or may not be based within the United States.

Reporting Appraisal Results to the SEI

This briefing is only possible due to the cooperation of organizations and individuals sending in their appraisal results to the SEI.

Reporting of results in the future will depend on continuation of this cooperation.

For forms, information, and instructions on how to report appraisals to the SEI, please visit:

http://www.sei.cmu.edu/sema/report.html

CMMI Transition Status 10-31-03[1]

Training

- Introduction to CMMI – 9578 trained
- Intermediate CMMI – 723 trained
- Introduction to CMMI Instructors – 206 trained
- SCAMPI Lead Appraisers – 317 trained

Authorized

- Introduction to CMMI V1.1 Instructors – 155
- SCAMPI V1.1 Lead Appraisers – 225

CMMI Transition Status 10-31-03$_2$

Transition Partnering

Introduction to CMMI

67 have signed

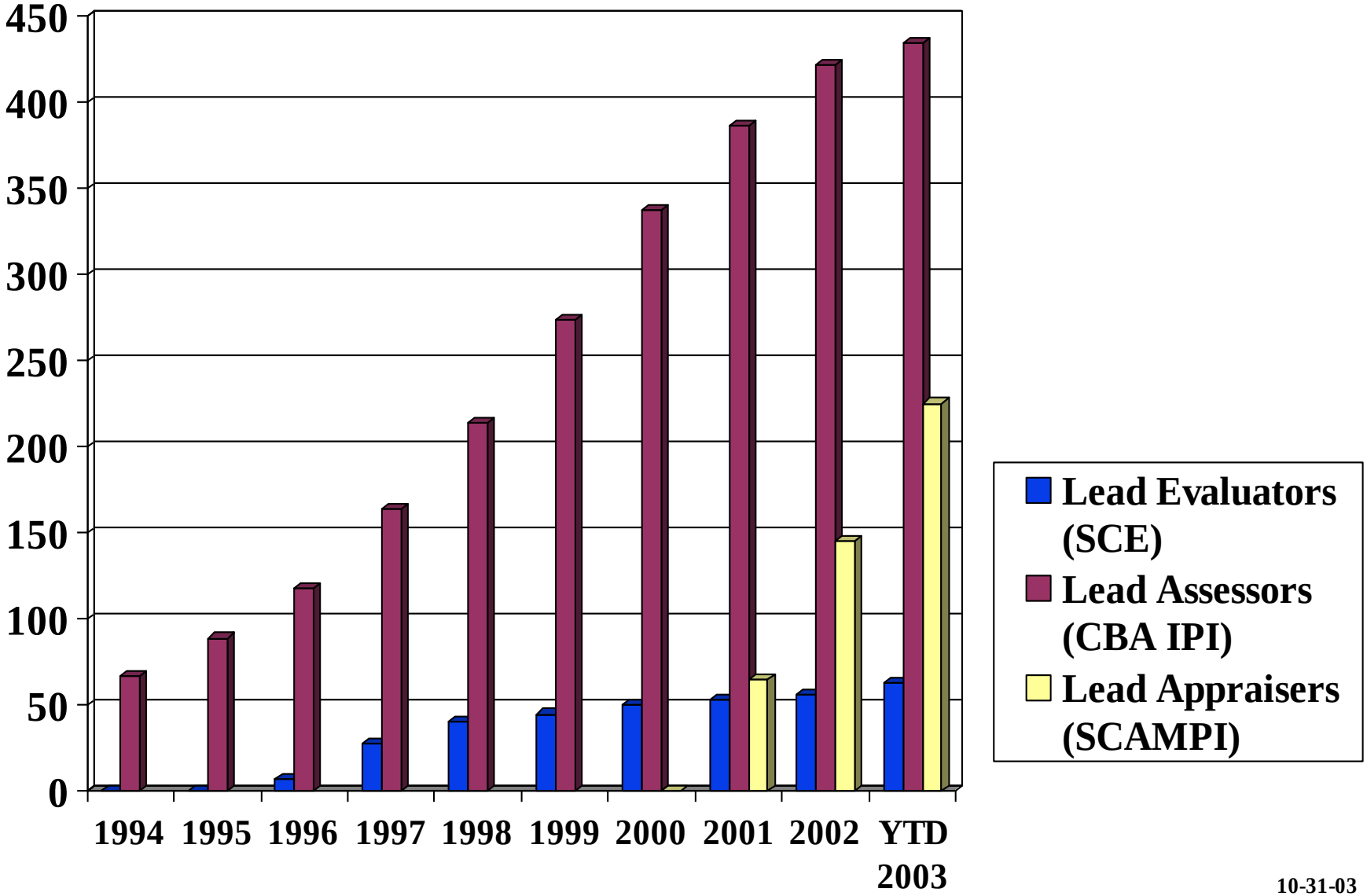
- 35 are commercial offerors only
- 19 are internal-use only
- 13 are both

SCAMPI Appraiser Services

138 have signed

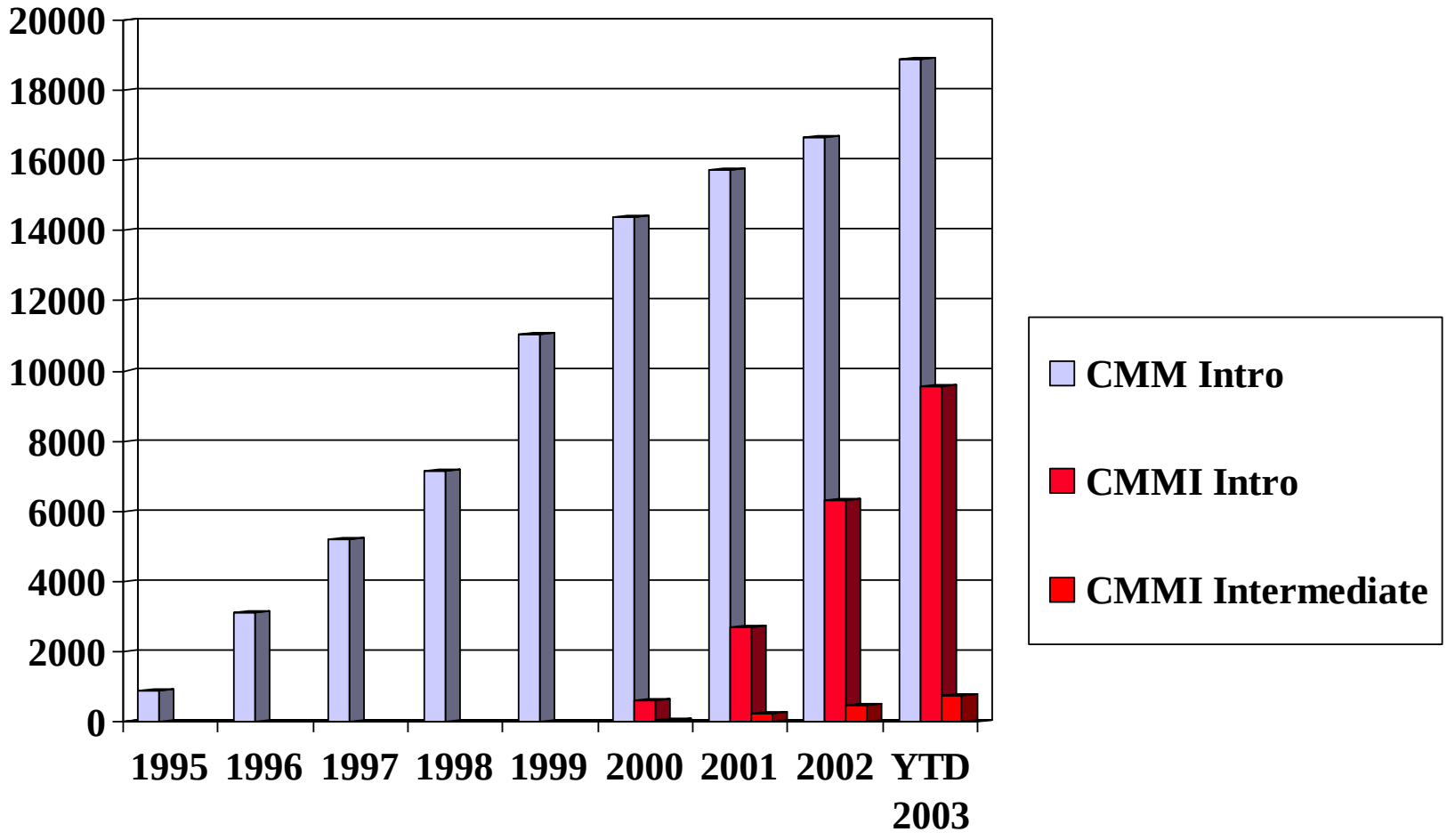
- 74 are commercial offerors only
- 12 are internal-use only
- 50 are both

Number of Lead Appraisers Authorized (Cumulative)



10-31-03

Intro to the CMM and CMMI Attendees (Cumulative)



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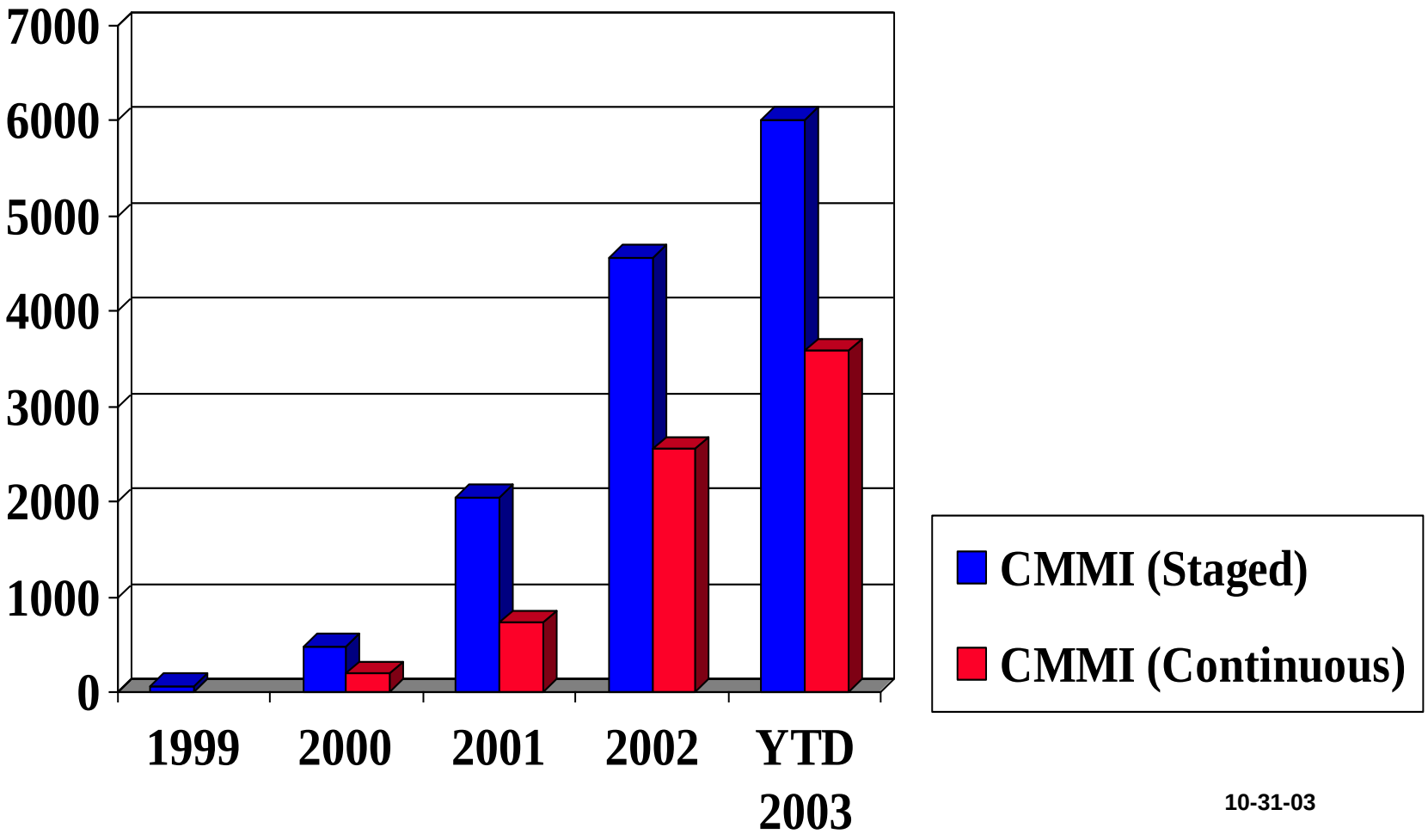
Number of CMMI Students Trained (Cumulative)



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CMMI Adoption Trends: Website Visits

The following organizations visited the CMMI Website over 1000 times each of these months, listed here in order of the most frequent visits/month:

July 2003

Northrop Grumman
Electronic Data Systems
IBM
The Navy
Lockheed Martin
Boeing
Raytheon
Intel
TRW Inc
The Army
NASA
Motorola
ACS Federal Services
SAIC
The Air Force
Siemens (Germany)
Hewlett Packard
Department of the Treasury
Nokia
Bosch (Germany)
Bank of America

August 2003

Electronic Data Systems
Northrop Grumman
IBM
Lockheed Martin
Intel
The Navy
Boeing
Raytheon
TRW Inc
NASA
SAIC
The Army
Department of the Treasury
The Air Force
Motorola
Nokia
Bosch (Germany)
Bank of America
ACS Federal Services
Hewlett Packard
Siemens (Germany)

September 2003

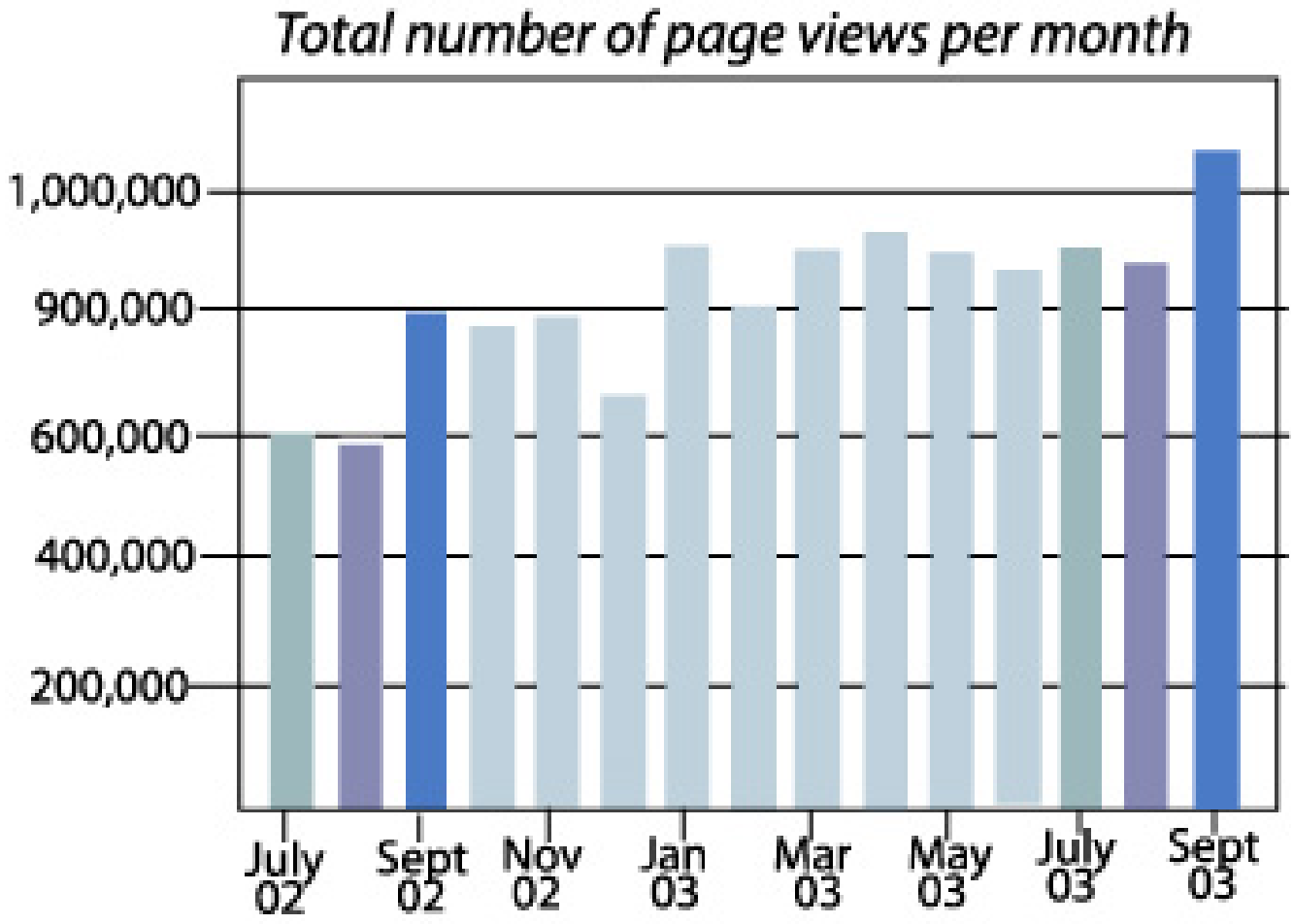
Electronic Data Systems
Northrop Grumman
Boeing
The Navy
IBM
Raytheon
Lockheed Martin
Nokia
Motorola
Intel
The Army
The Air Force
TRW Inc
Bosch (Germany)
Bank of America
SAIC
Department of the Treasury
Siemens (Germany)
NASA
Hewlett Packard
ACS Federal Services

CMMI Adoption Trends: Website Visits

Two hundred sixty-two organizations visited the CMMI Website more than 200 times during September 2003:

- **30 defense contractors**
- **8 DoD activities**
- **33 universities**
- **166 commercial companies**
- **25 government agencies**

CMMI Adoption Trends: Website Visits



CMMI Current Activities

Development of "Acquisition Module" started September '03

- **Sponsored by OUSD(AT&L) Defense Systems and NDIA**
- **Oriented towards major program acquisition offices in DoD and government**
- **Small experienced team led by Tom Bernard, USAF**
  - **Hal Wilson, Northrop Grumman**
  - **Roger Bate and Brian Gallagher, SEI**
- **90-day effort**
- **Module content is synopsis of CMMI elements critical to program performance (25-30 pages MAX)**
  - **What must PMs do?**
  - **What must they facilitate in their prime contracts?**
  - **When must they participate with contractor?**
- **Includes short introspective questions to determine PM shop effectiveness in terms of the above**
- **Will be complete Dec 2003, piloted, and made available**

CMMI Future Plans

CMMI Project made stability commitment at Dec 2001 release of V1.1

- **No model changes for at least three years**
- **Designated nominal change cycle of five years**

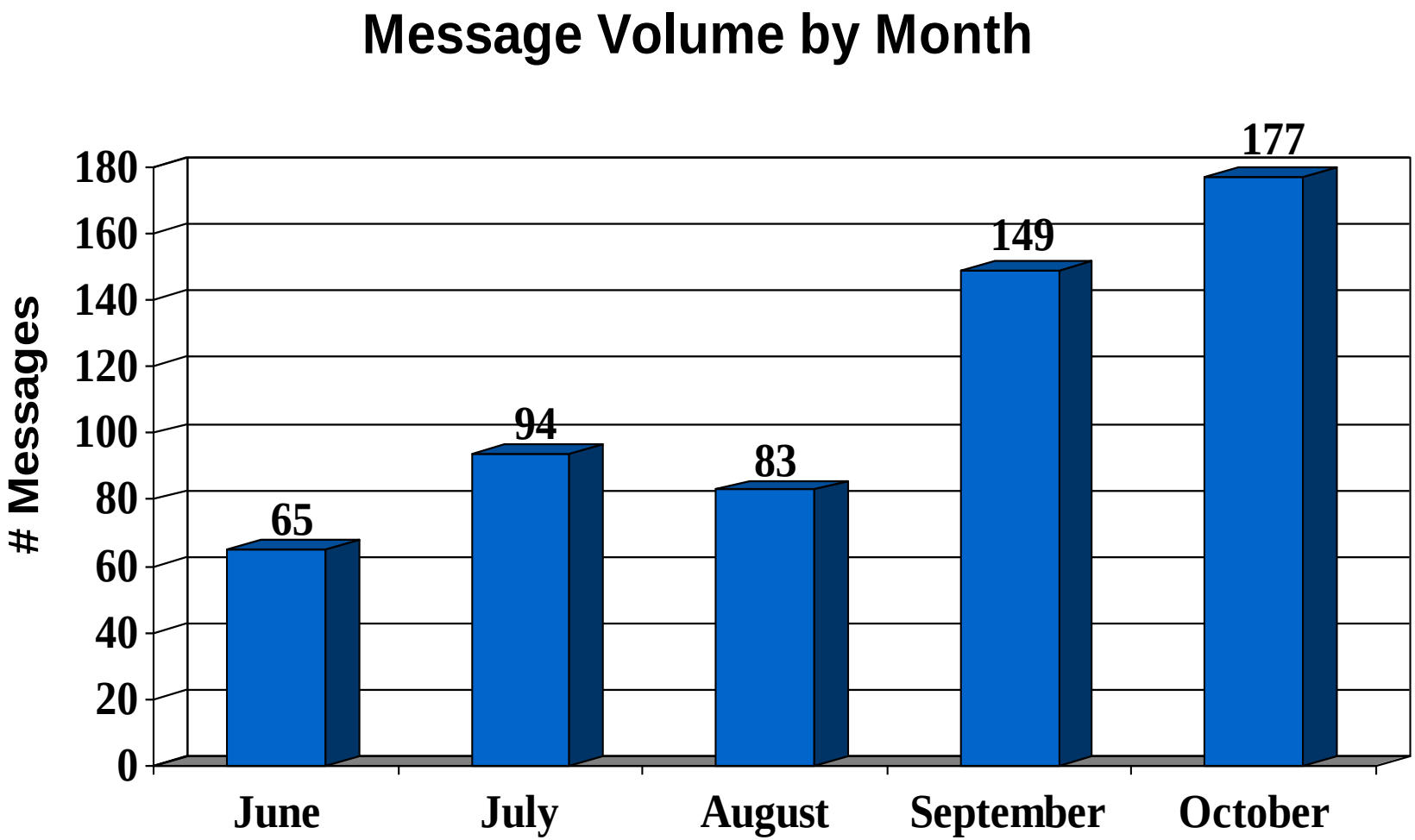
Sunset of SW-CMM begins Jan 1, 2004, completes by Dec 2005

- **No more formal training from the SEI**
- **No further Lead Assessor/Evaluator authorizations**

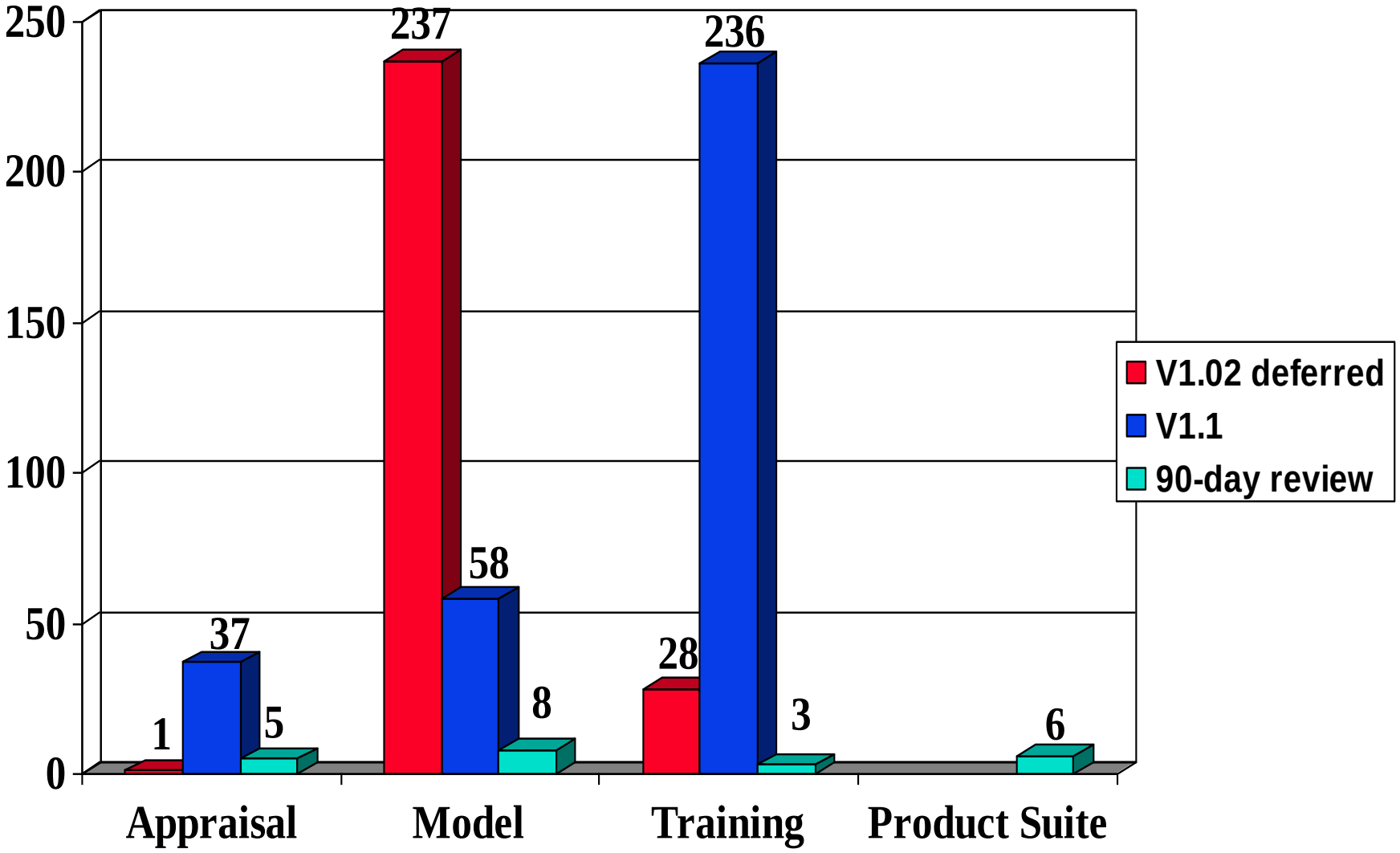
Planning process for CMMI V1.2 “next iteration” has started

- **Open call for additional Change Requests (CRs) made**
  - **Final submittal date is Dec 12, 2003**
- **New CRs plus previously submitted CRs will form basis of update deliberations by CMMI Steering Group, CMMI Product Team and Expert Groups**

Questions Received at cmmi-comments June–Oct 2003



Change Requests/Comments Received



CMMI Future Plans: The Process

All CRs will be carefully evaluated:

- **Steering Group (SG) establishes criteria**
- **Product Team/Expert Groups perform analysis**
- **Summary Recommendations made for candidate Change Packages (CPs)**
  - **SG validates/confirms**
- **Initial CPs go to Configuration Control Board (CCB)**
- **CCB Approves/Rejects/Rejects With Comments**
- **Product Team acts**
  - **Approved initial CPs are developed into Implementation Packages (IPs)**
  - **Reject-With-Comment CPs are redirected per comment**
- **IPs submitted to CCB**
  - **CCB Approves/Rejects individual IPs**
- **Approved IPs incorporated into Product Suite**
- **Planned release of update: between 4Q05 and 4Q06**

CMMI Future Plans: Content

CMMI content will evolve to meet user needs and desires

- **Items already noted are:**
  - **Safety**
  - **Security**
  - **Hardware design**
  - **Acquisition**
  - **Other**

- **Basic CMMI structure will not change**
  - **Stability is paramount, but content flexibility is needed**

- **Changes will be considered to:**
  - **Model**
  - **SCAMPI**
  - **Training**

- **Product and Expert Teams populated from user community**

CMMI Future Plans - ROI

The SEI is continuing an effort to collect Return On Investment (ROI) and Benefits data for CMMI implementation.

See first CMMI Impacts and Benefits report at http://www.sei.cmu.edu/publications/documents/03.reports/03sr009.html

Similar data was collected and aggregated for SW-CMM and proved very beneficial to other SW-CMM adopters.

Types of data requested:

- **Productivity & efficiency**
- **Error reduction (design, delivered product)**
- **Customer satisfaction**
- **Improved cost/schedule predictability**
- **Cost reductions**
- **Time-to-market**
- **Product optimization**
- **Other**

Submit data to the SEI via cmmi-comments@sei.cmu.edu

CMMI Training Updates

CMMI training has been updated twice since model release

- **Responses to attendee suggestions/change requests**
- **Clarifications**

Training updates do not perturbate Product Suite configuration

One update being considered is to teach a single CMMI Introduction course, vs. Staged and Continuous versions

- **Model content essentially the same for both versions**
- **Single course would depict the basic model content and describe the differences between the representations**

Positive effect would be to eliminate perceived differences between the two representations

Summary

CMMI adoption is widespread
- **DoD and commercial**
- **U.S. and offshore**

CMMI adoption is on much faster pace than SW-CMM at the same period of its life

CMMI training and appraisals continue to increase at rapid pace

Application Notes have covered the software-only users

Content update will occur under careful deliberation and consideration in a controlled and open process

CMMI will always be sensitive to expressed user needs

CMMI ROI data will be collected, aggregated, and disseminated

CMMI training will be updated as needed to meet user requirements