

CMMI[®] Current State and Future Plans

**Bob Rassa, Raytheon
Industry CMMI Chair**

**Clyde Chittister
Chief Operating Officer,
Software Engineering Institute**

Sponsored by the U.S. Department of Defense

Topics

- ➔ **Appraisal Results**
- Transition Status**
- Product Suite V1.2 Update**
- Summary**

Current Appraisal Synopsis

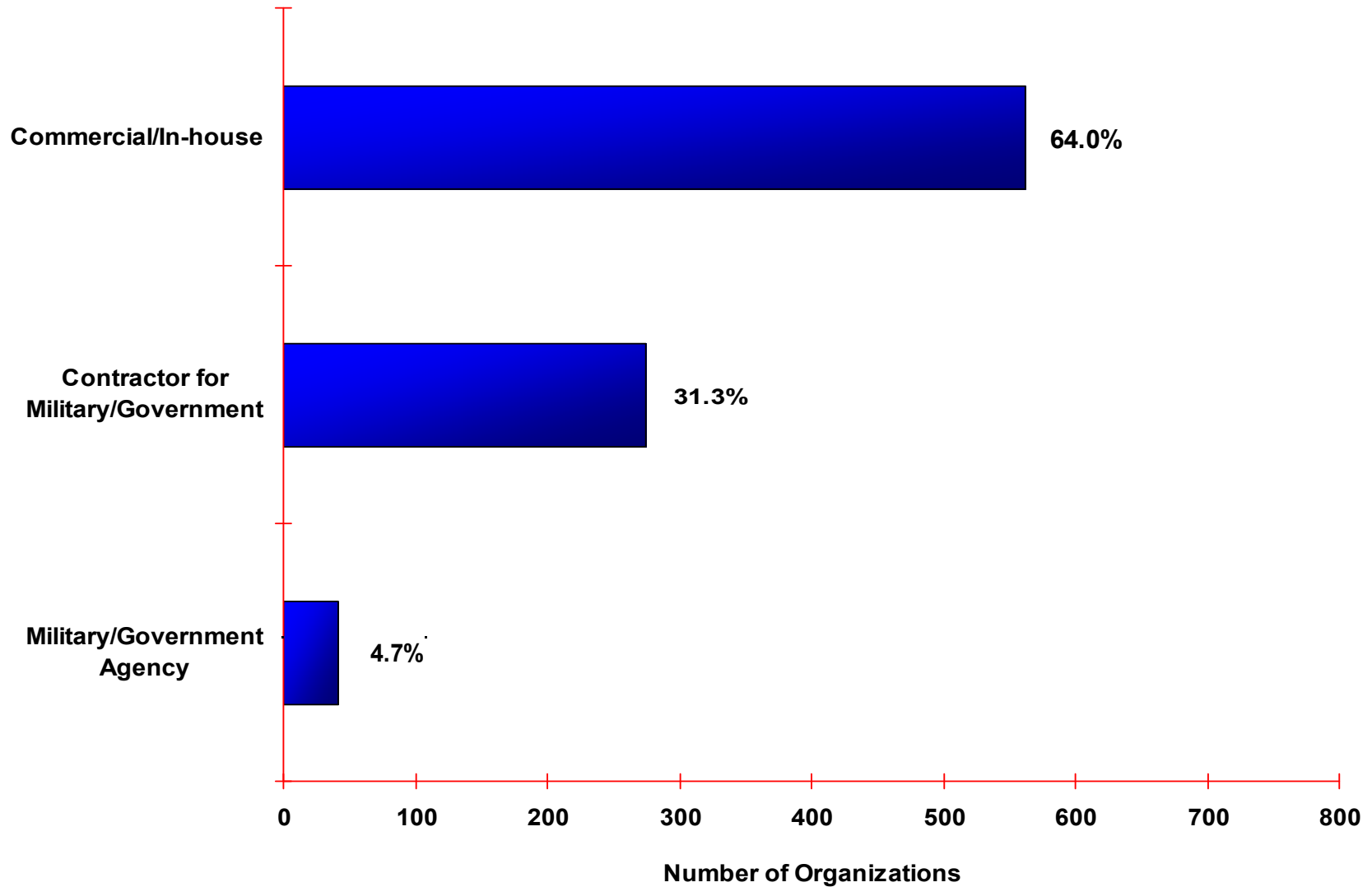
Based on SCAMPISM V1.1 Class A appraisals conducted since April 2002 release through August 2005 and reported to the SEI by September 2005.

977 appraisals
878 organizations
206 participating companies
86 reappraised organizations
3,686 projects
59.6% non-USA organizations

* Organizations previously appraised against CMMI V1.0 and who 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 to find answers to questions you may have about this briefing, before contacting the SEI directly.

Reporting Organizational Types

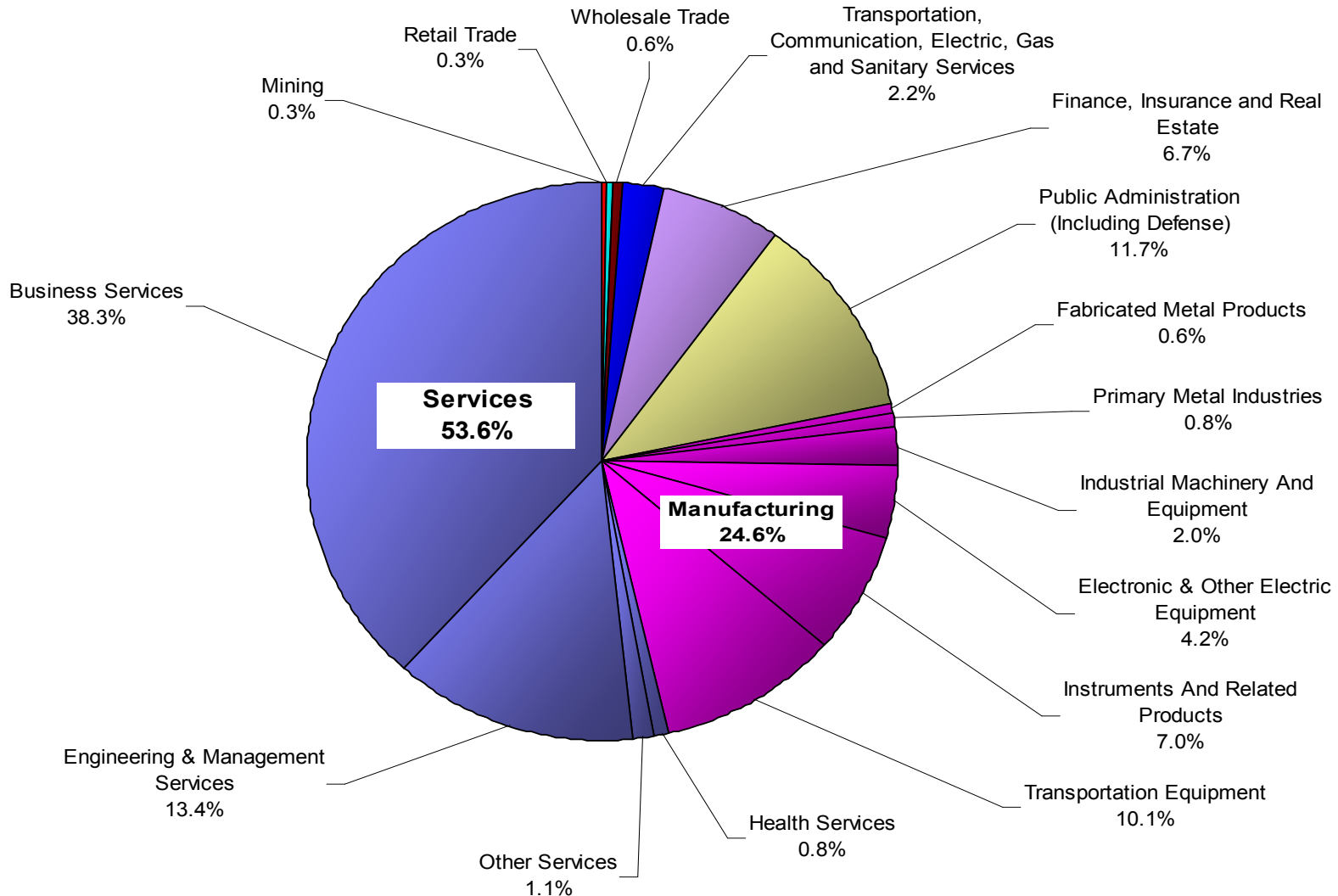


Based on **878** organizations

9/30/05

Organizations Type

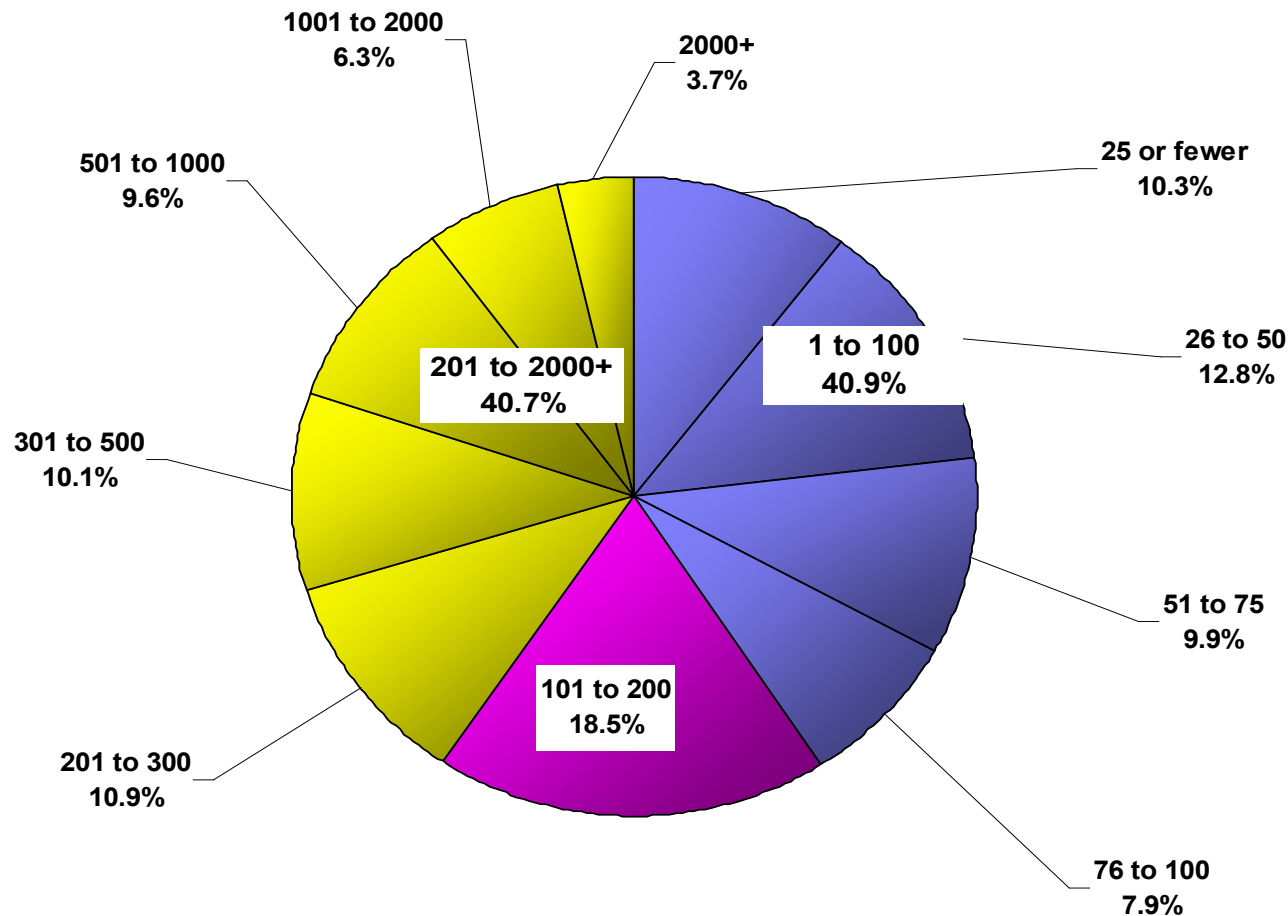
Based on Primary Standard Industrial Classification (SIC) Code



Based on **358** organizations reporting SIC code. For more information visit: <http://www.osha.gov/oshstats/sicser.html> 9/30/05

Organizational Size

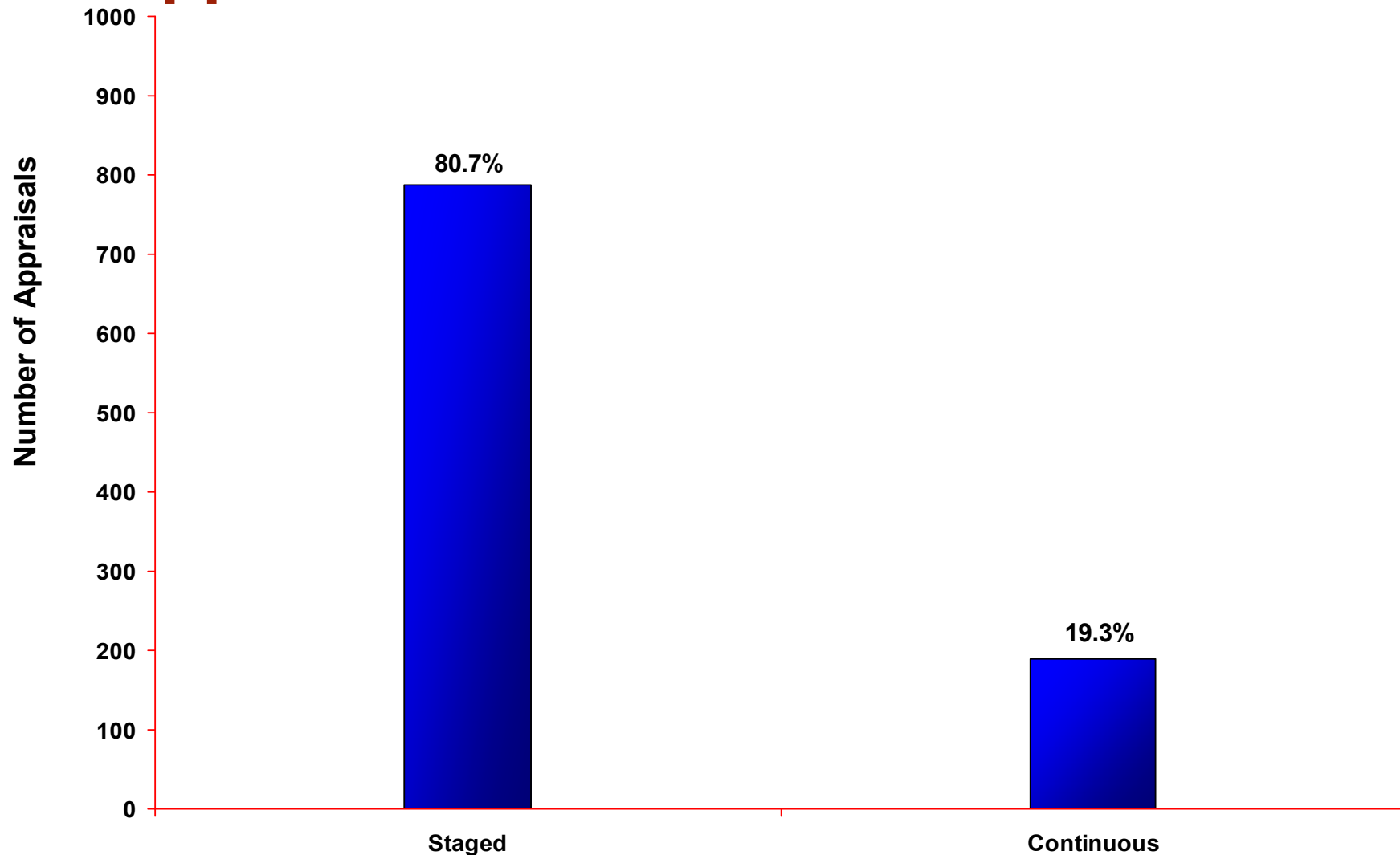
Based on the total number of employees within the area of the organization that was appraised



Based on **861** organizations reporting size data

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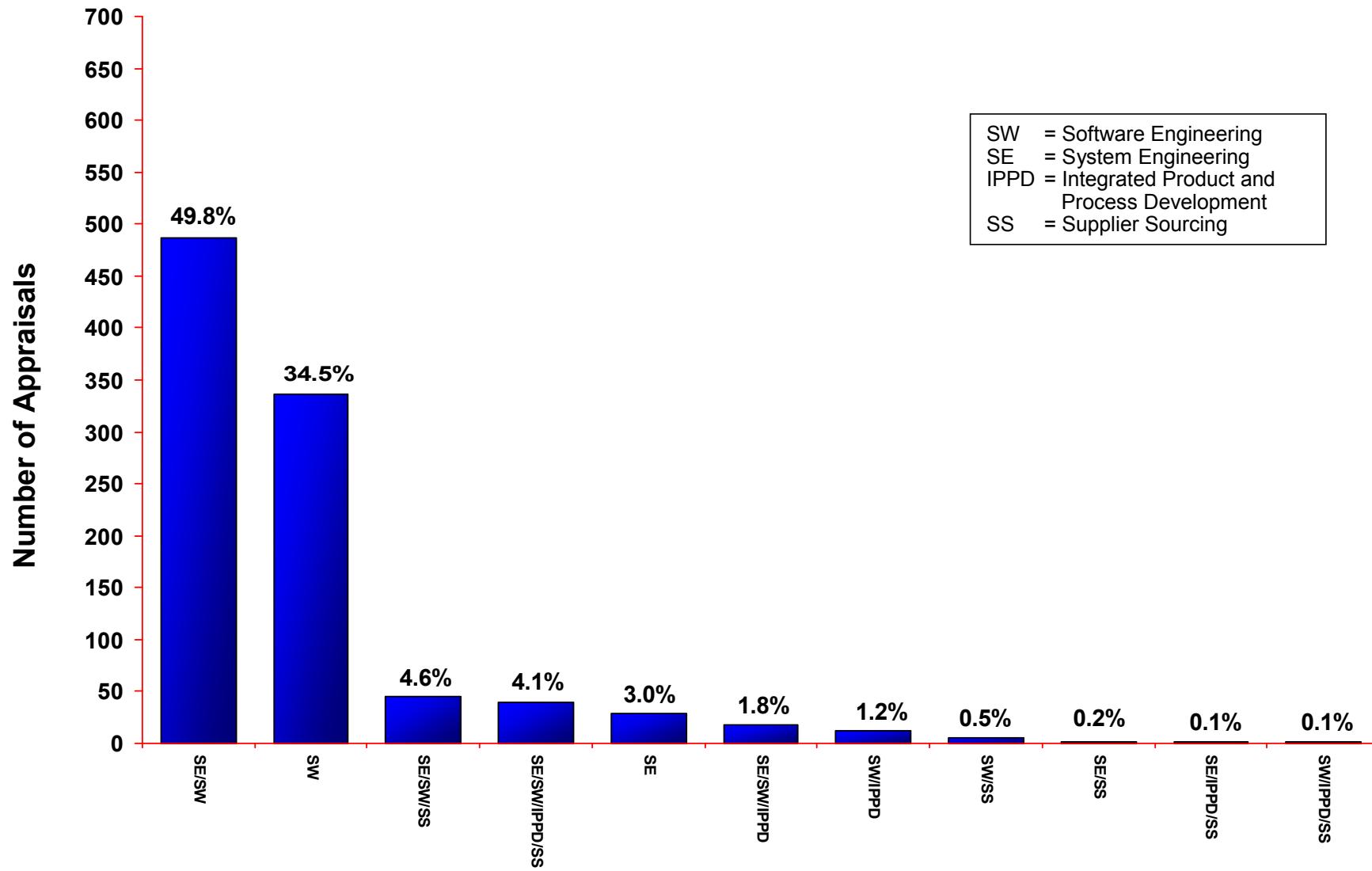
Model Representations Selected for Appraisals



Based on **977** appraisals

9/30/05

Disciplines Selected for Appraisals

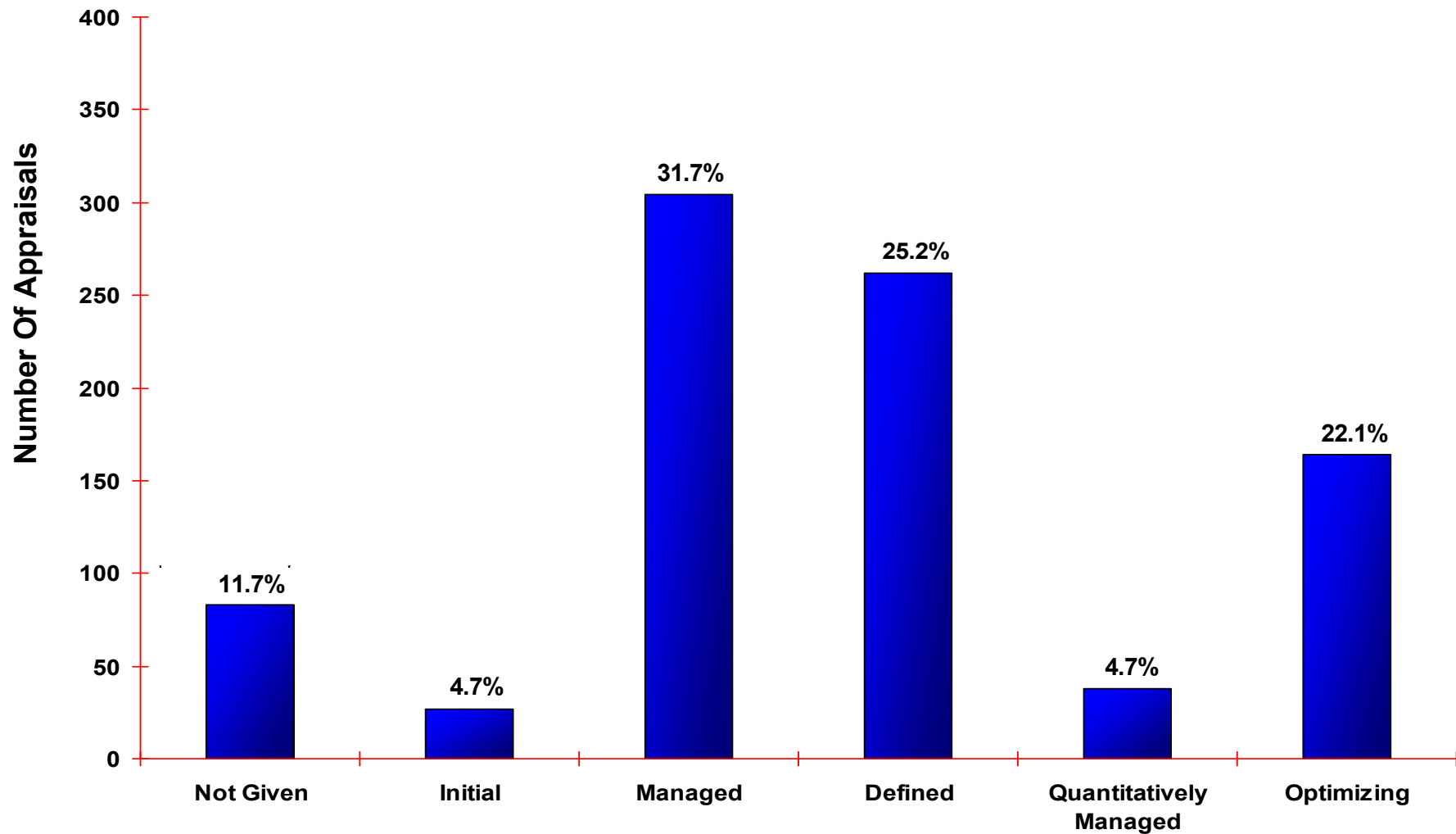


SW = Software Engineering
 SE = System Engineering
 IPPD = Integrated Product and Process Development
 SS = Supplier Sourcing

Based on **977** appraisals reporting coverage

9/30/05

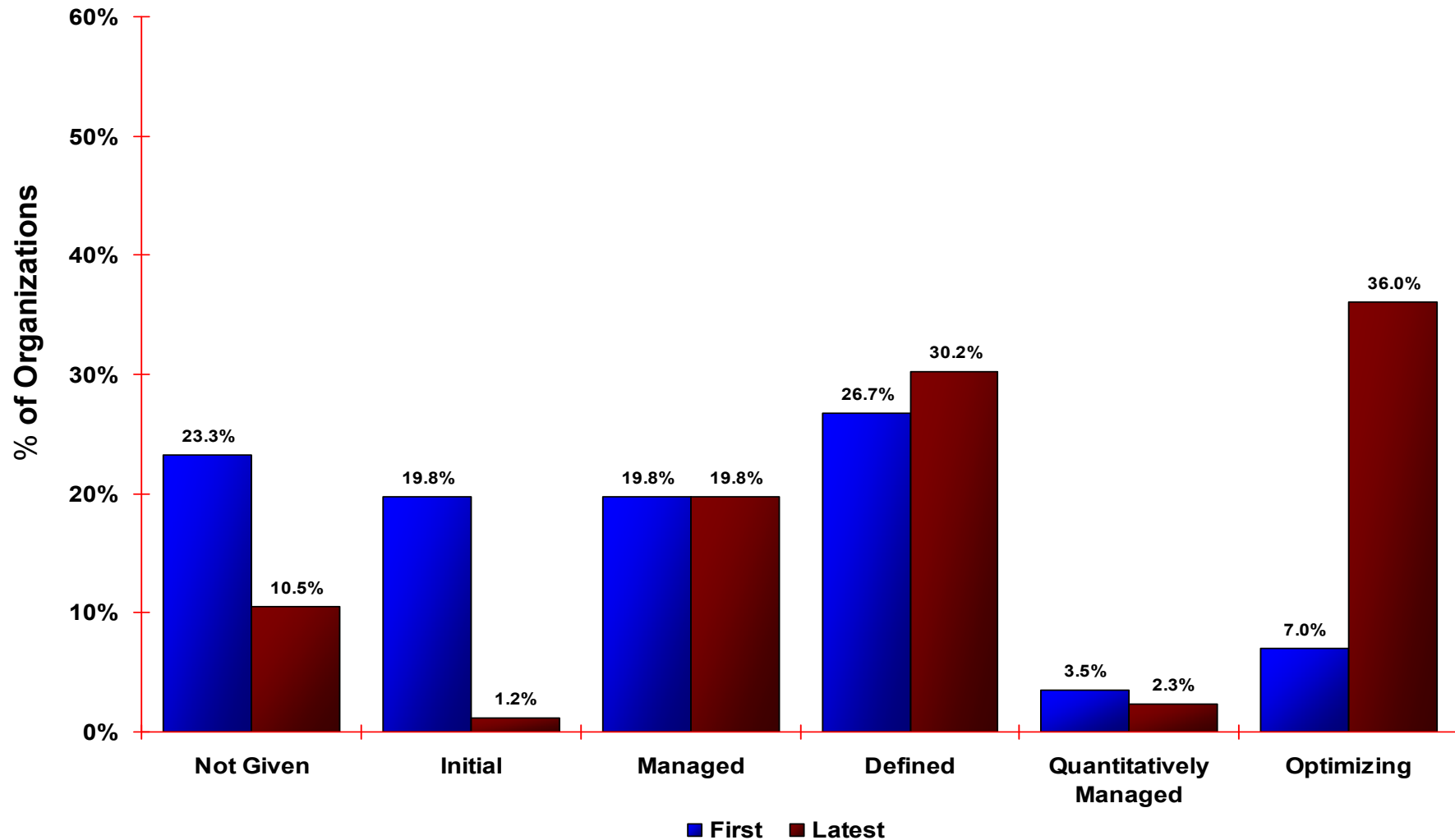
Maturity Profile by All Reporting Organizations



Based on most recent appraisal of **878** organizations

9/30/05

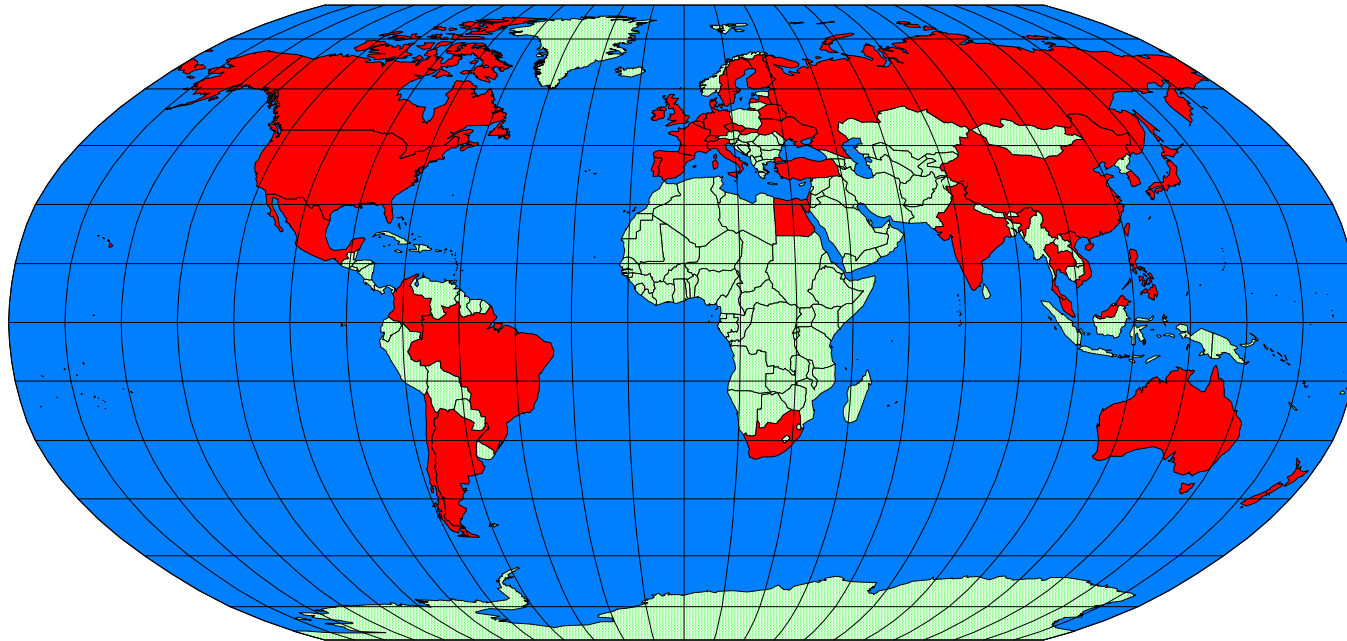
Maturity Level of First and Latest Appraisal



Based on **86** reappraised organizations using their first and latest appraisal

9/30/05

Countries Where Appraisals Have Been Performed and Reported to the SEI

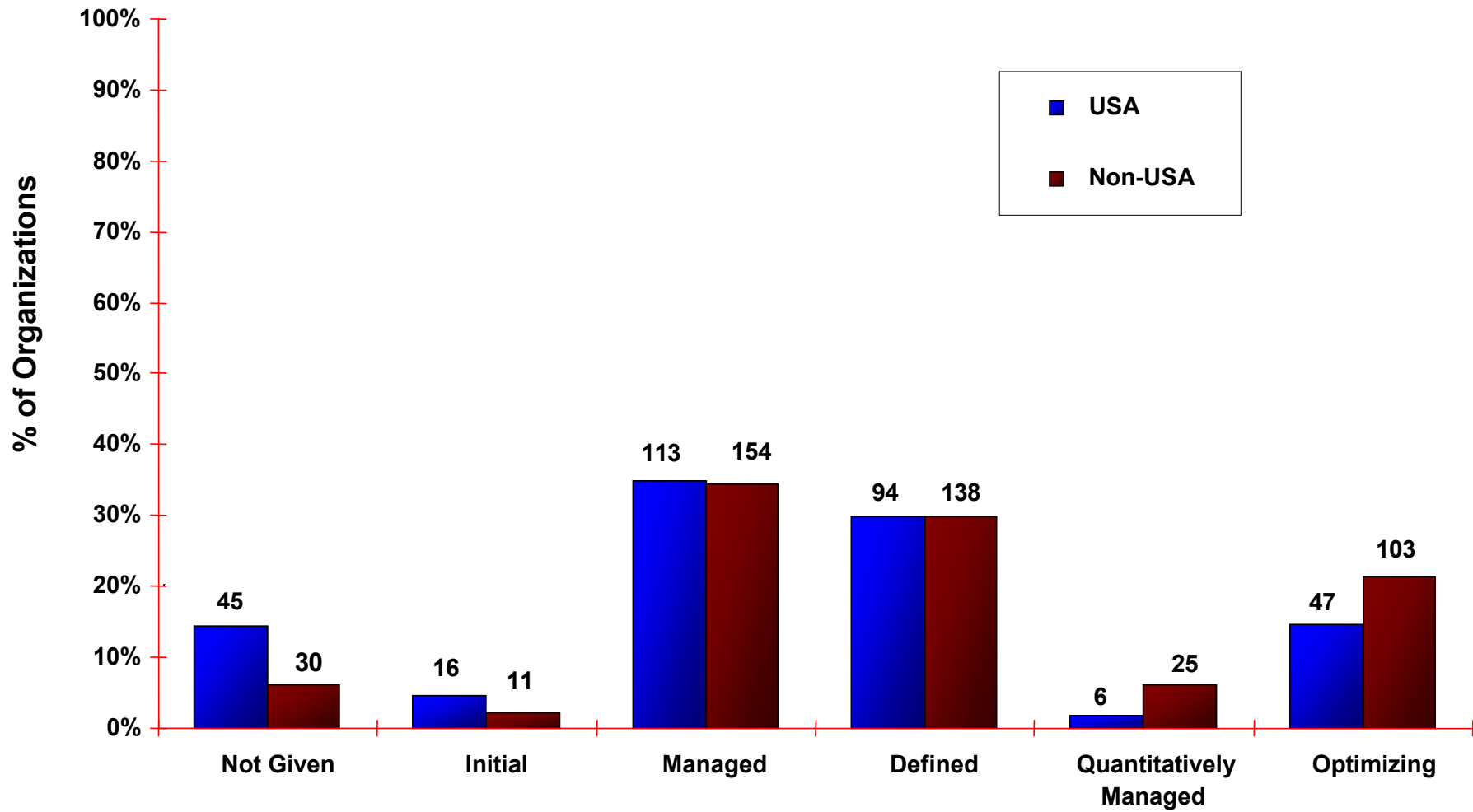


Argentina	Australia	Belarus	Belgium	Brazil	Canada	Chile
China	Colombia	Czech Republic	Denmark	Egypt	Finland	France
Germany	Hong Kong	India	Ireland	Israel	Italy	Japan
Korea, Republic of	Latvia	Malaysia	Mexico	Netherlands	New Zealand	Philippines
Portugal	Russia	Singapore	Slovakia	South Africa	Spain	Sweden
Switzerland	Taiwan	Thailand	Turkey	Ukraine	United Kingdom	United States
Vietnam						

Purple country name: new additions with this reporting since Nov. 2004

9/30/05

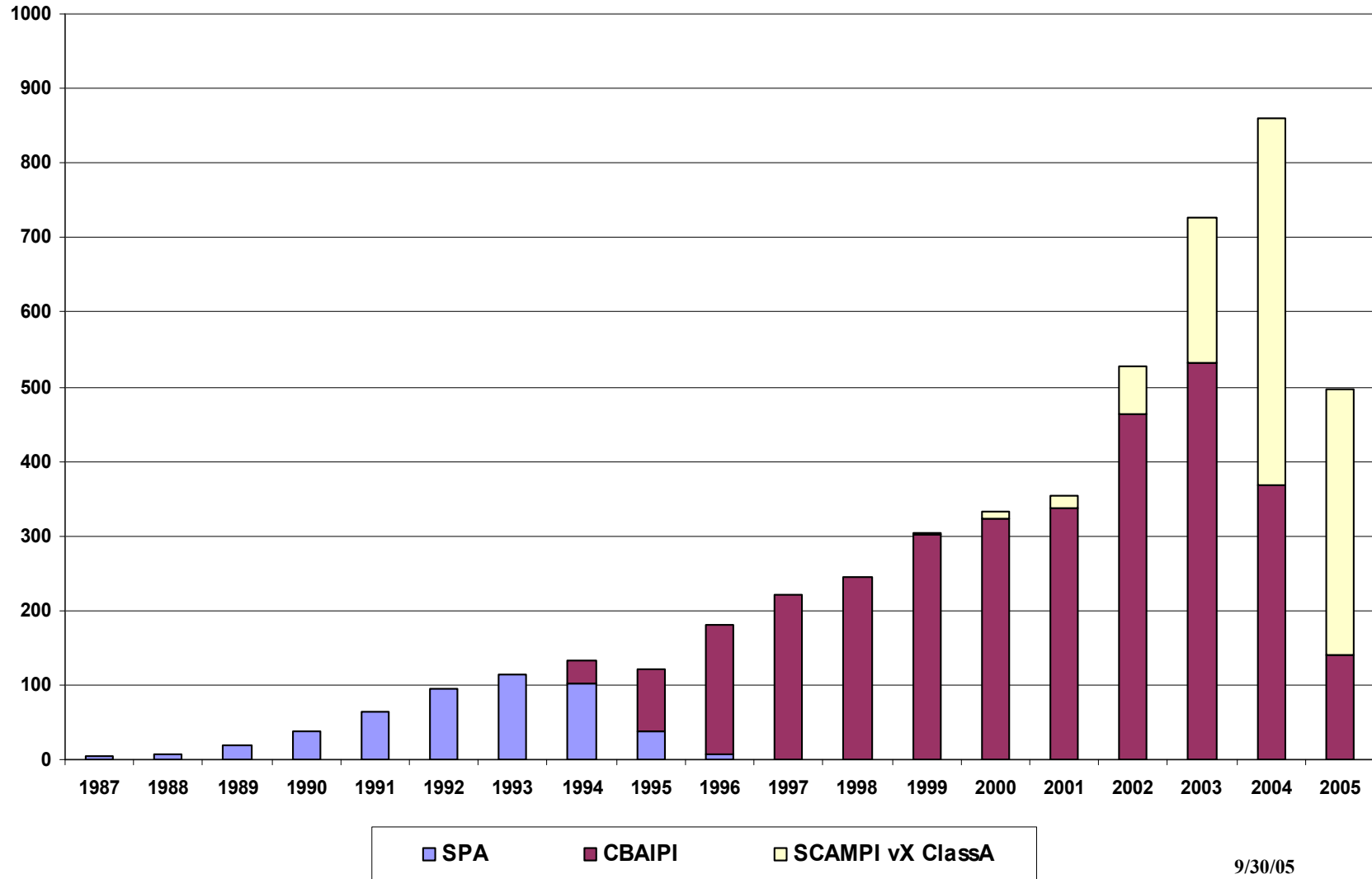
Maturity Profile by All Reporting USA and Non-USA Organizations



Based on **355** USA organizations and **523** Non-USA organizations

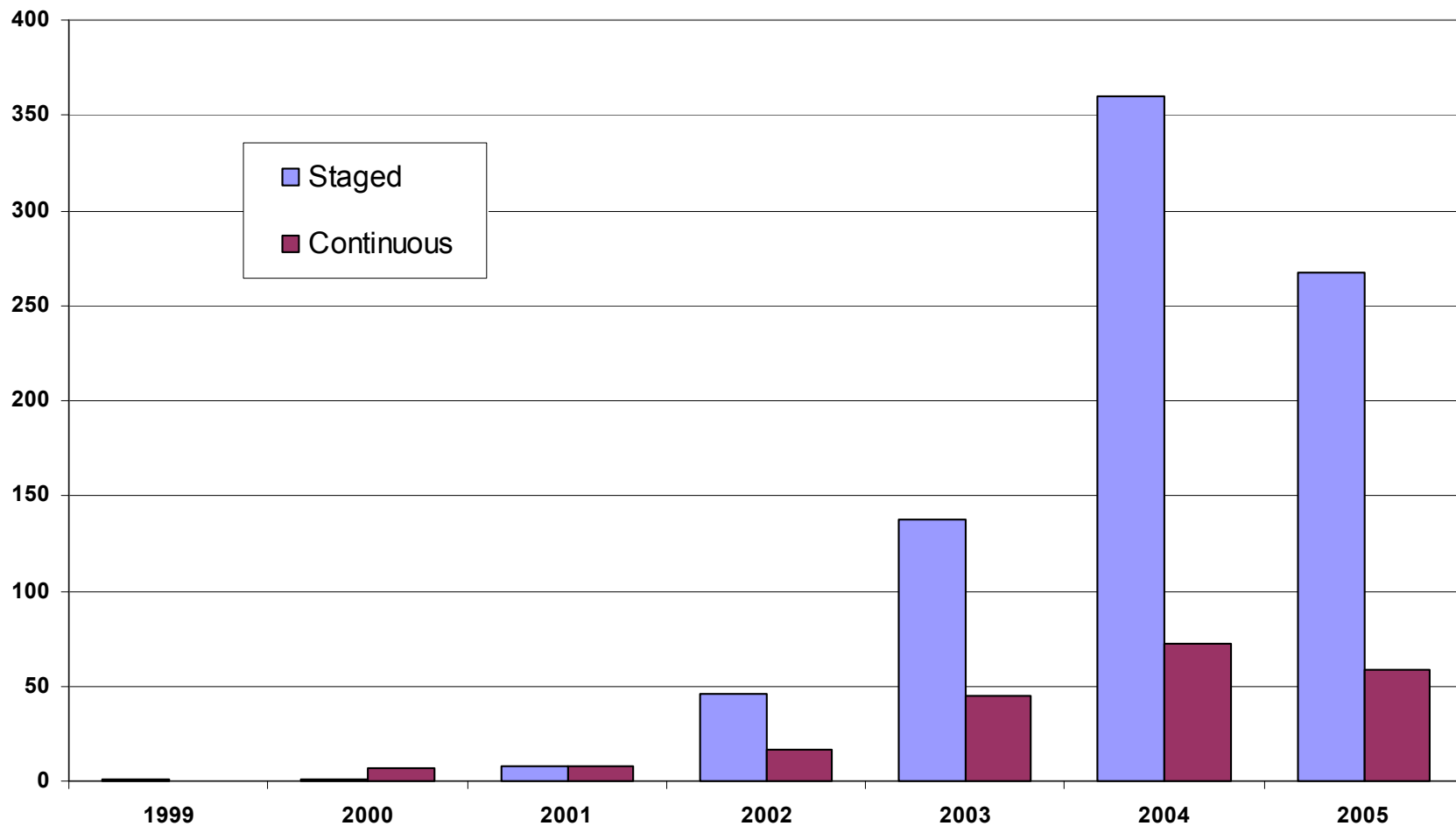
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Number of Appraisals Conducted by Year



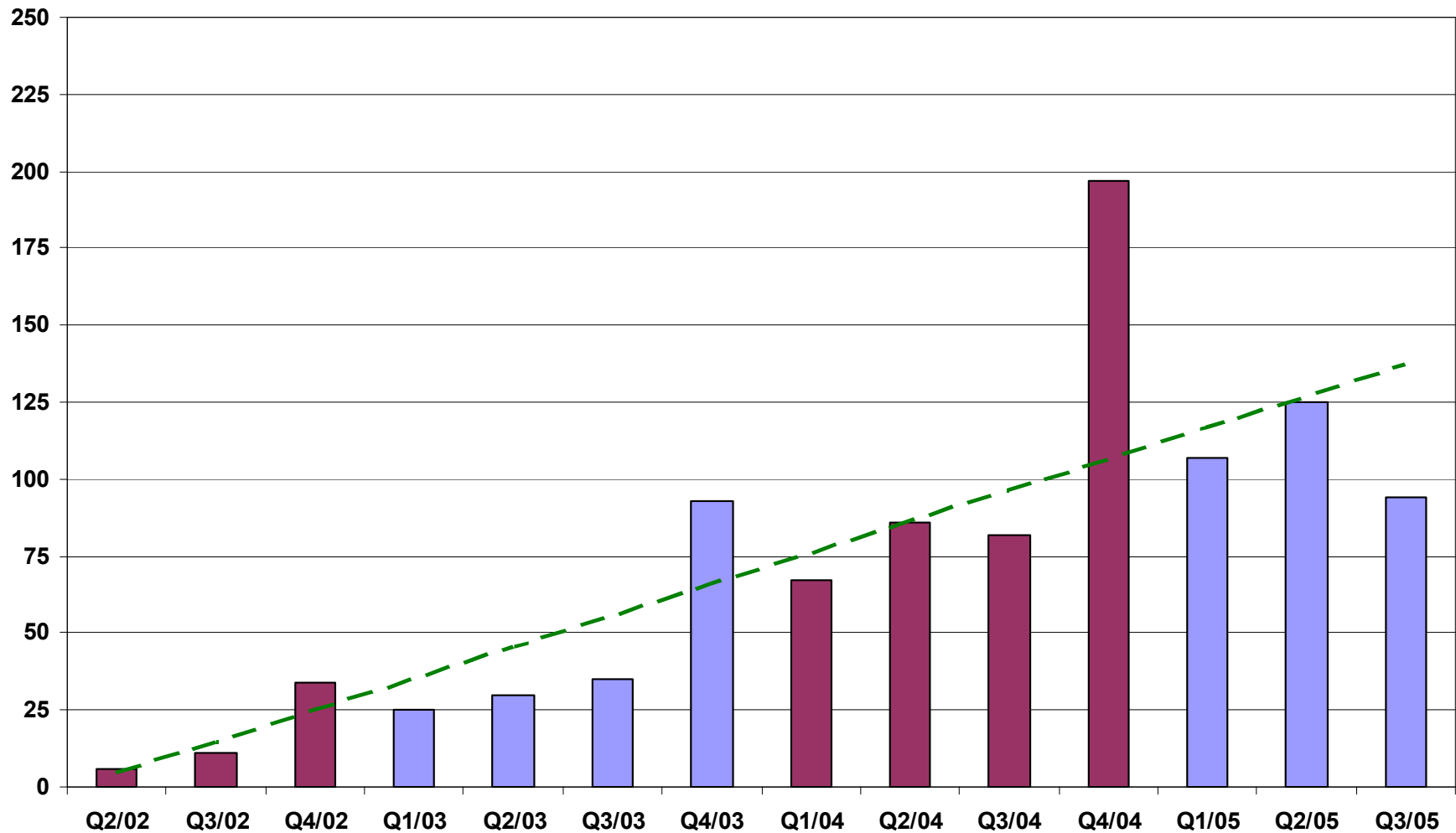
Number of SCAMPI Version x.x Class A Appraisals

Conducted by Year by Model Representation (where representation is reported)



9/30/05

Number of SCAMPI Version 1.1 Class A Appraisals Conducted by Quarter



9/30/05

Appraisal Results Summary

977 appraisals have been reported since the April 2002 SCAMPI Class A Version 1.1 release.

Commercial/In-House organizations reporting appraisals is increasing more rapidly than other organizational categories.

Government/Military and Government/Military Contractors reporting appraisals is increasing at a stable and consistent rate.

The highest percentage of Commercial/In-House organizations reporting appraisals is from outside the USA.

The highest percentage of Government/Military Contractors reporting appraisals is from the USA.

Comparing early reports of the SW-CMM maturity profile with early CMMI data reflects a more mature CMMI profile.

Additional information and charts will be released as more appraisals are reported and more data is available to support the breakdowns.

Topics

Appraisal Results

➔ Transition Status

Product Suite V1.2 Update

Summary

CMMI Transition Status – 9/30/05 ₁

Training

- Introduction to CMMI – 38,891 trained
- Intermediate CMMI – 1,738 trained
- Introduction to CMMI Instructors – 372
- SCAMPI Lead Appraisers – 577 trained

Authorized

- Introduction to CMMI V1.1 Instructors – 290
- SCAMPI V1.1 Lead Appraisers – 398

CMMI Transition Status – 9/30/05 ²

Transition partnering

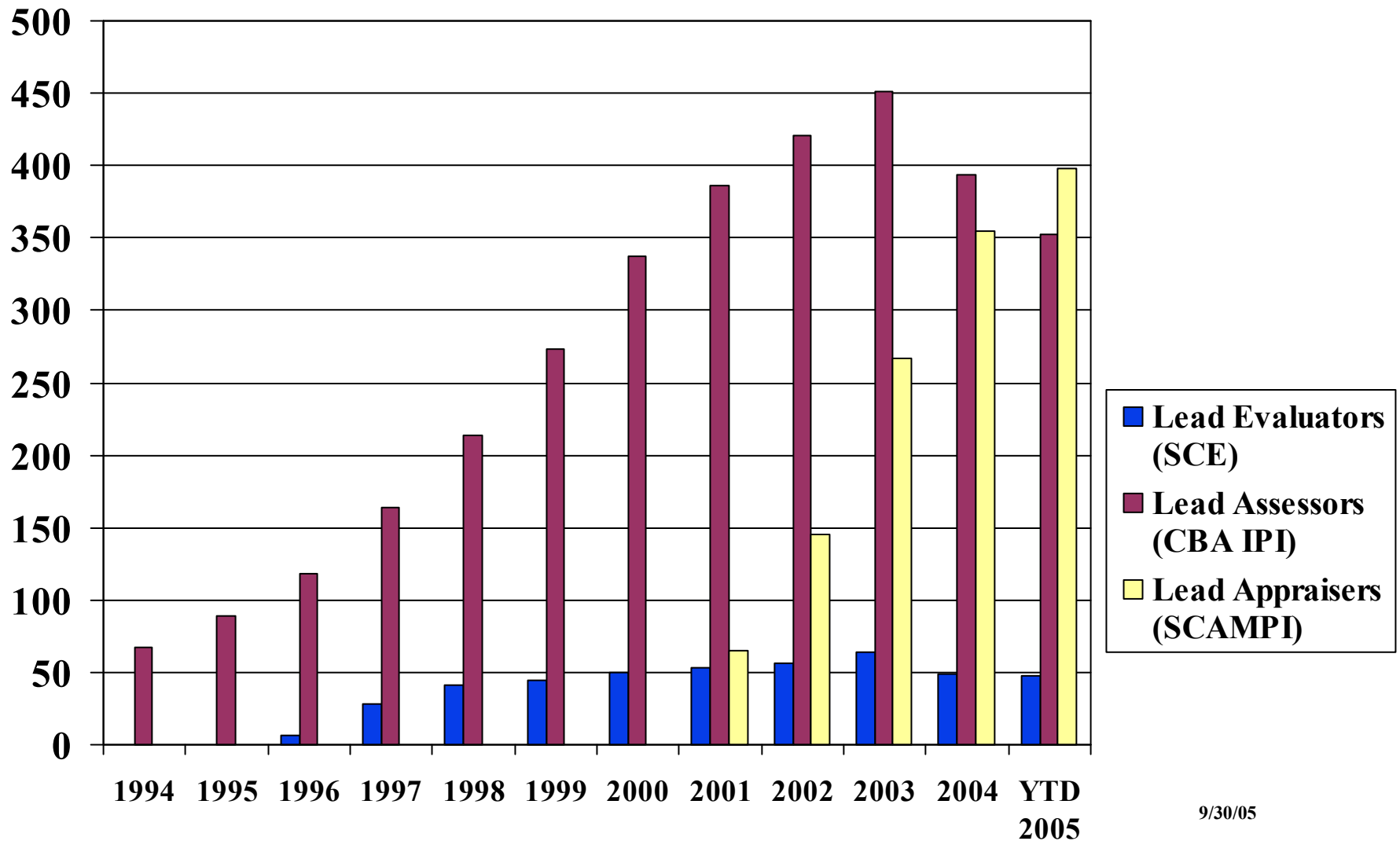
Introduction to CMMI

- **190 have signed**
 - **172 are commercial offerors only**
 - **14 are internal-use only**
 - **4 government-use only**

SCAMPI Appraiser Services

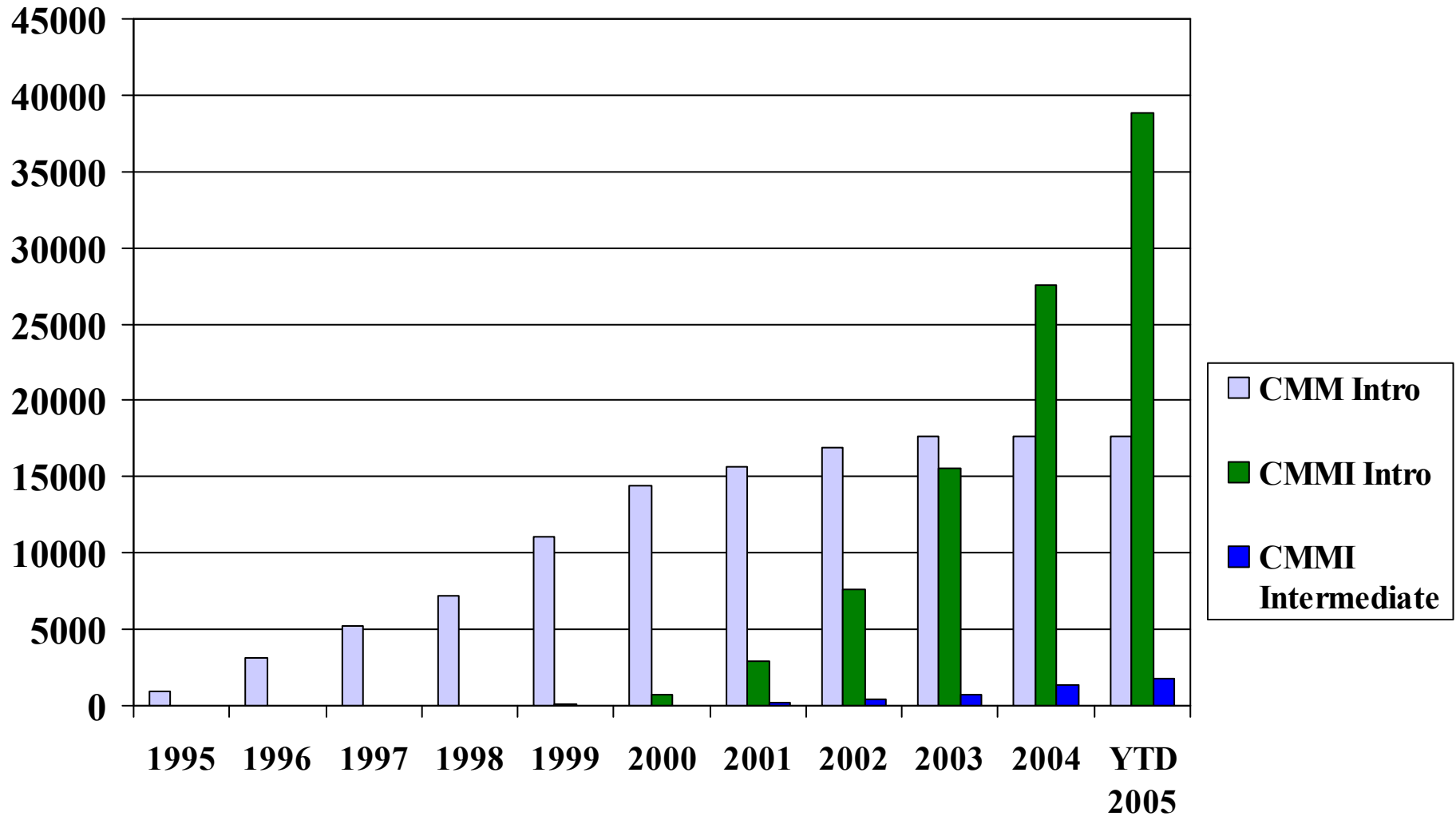
- **213 have signed**
 - **193 commercial offerors only**
 - **14 are internal-use only**
 - **6 government-use only**

Number of Lead Appraisers Authorized (Cumulative)

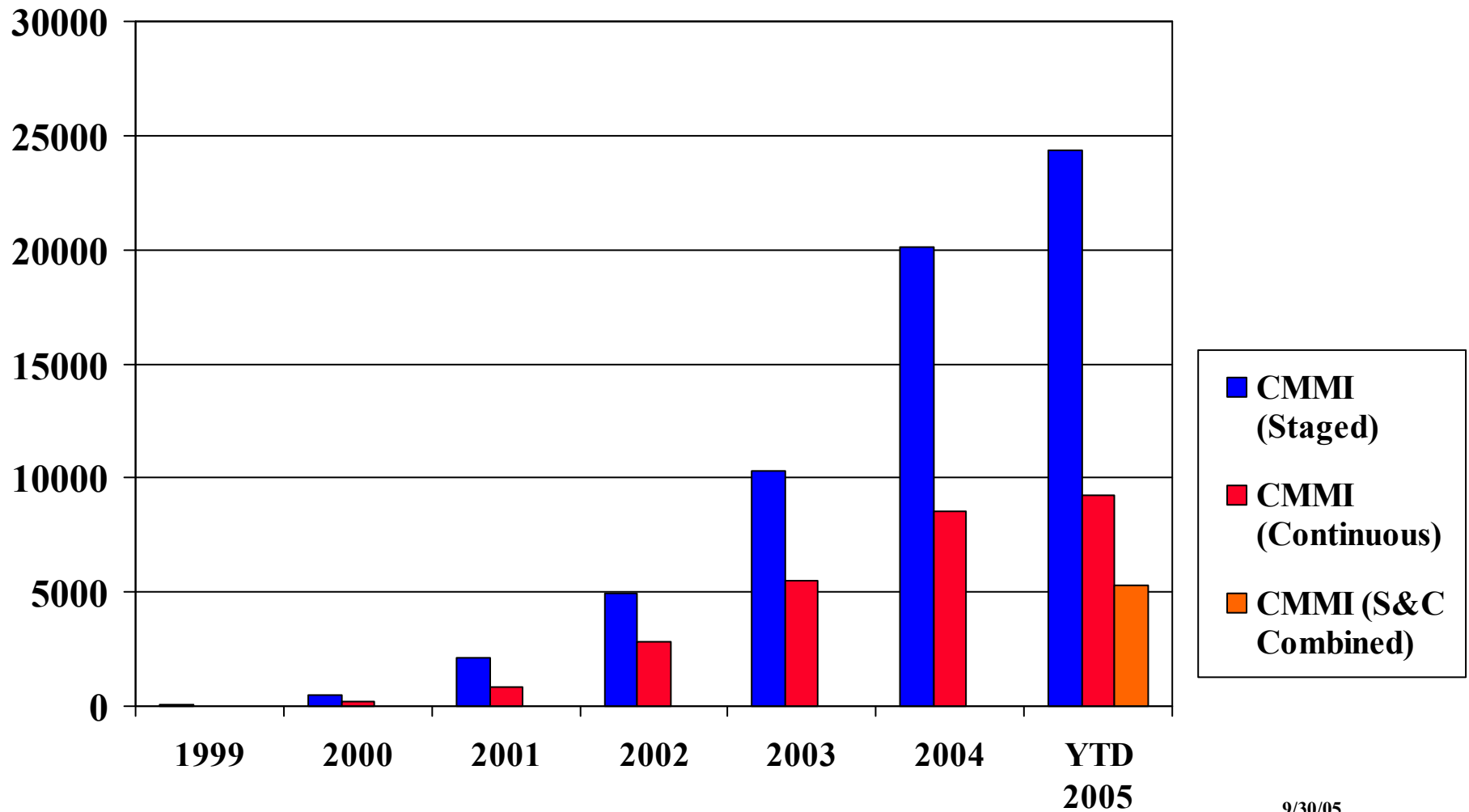


9/30/05

Intro to the CMM and CMMI Attendees (Cumulative)



Number of CMMI Students Trained (Cumulative) as of 9/30/05



9/30/05

CMMI Adoption Trends: Website Visits ₁

CMMI web pages hits

- **1.8M/month**
- **Exceeded 60K/day in August 2005**

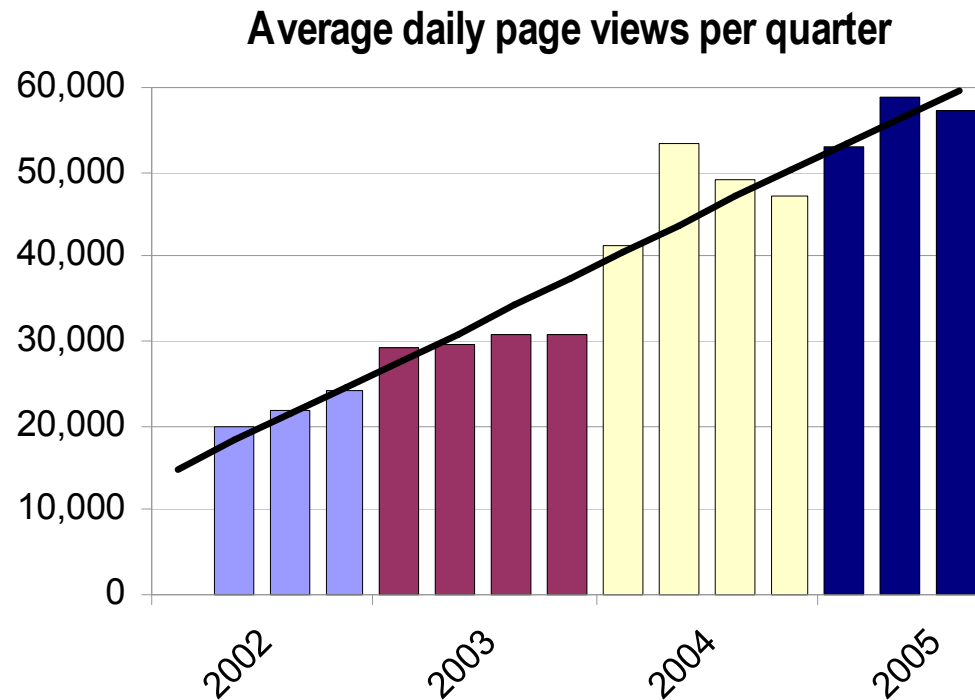
443 organizations visited the CMMI Website more than 200 times during September 2005:

- **29 Defense contractor organizations**
- **12 DoD organizations**
- **49 Universities**
- **328 Commercial companies**
- **25 Non-DoD government agencies**

CMMI Adoption Trends: Website Visits ₂

The following were the top viewed pages on the CMMI Website in September 2005:

- CMMI Main Page
- What is CMMI?
- CMMI Models and Modules
- Getting Started with CMMI Adoption
- CMMI Training, Events, & Forums



Performance Results Summary ₁

Improvements	Median	# of data points	Low	High
Cost	20%	21	3%	87%
Schedule	37%	19	2%	90%
Productivity	67%	16	11%	255%
Quality	50%	18	29%	132%
Customer Satisfaction	14%	6	-4%	55%
Return on Investment	4.8 : 1	14	2 : 1	27.7 : 1

- N = 24, as of 9 November 2005
- Organizations with results expressed as change over time

Performance Results Summary ₂

Credible quantitative evidence

(<http://www.sei.cmu.edu/cmmi/results.html>)

- 28 separate organizations as of November 2005
- Major Website update for CMMI Technology Conference in November 2005
 - Almost 50% more data points in the new table
 - Update includes a few results where new evidence has become available since March 2005
- Initial CMMI benefits and ROI report, October 2003
- Forthcoming TR
- Frequent presentations and tutorials
 - CMMI Technology, SEPG, ESEPG, etc.

Sources

- Conference presentations
- Published papers
- Direct communication with the SEI
- Future results from
 - case vignettes, case studies, community benchmarking

Topics

Appraisal Results

Transition Status

➔ Product Suite V1.2 Update

Summary

CMMI Version 1.2 Plan

“Single book, single course” strategy begun

- **V1.2, like the Addison-Wesley book, will consolidate both staged and continuous representations**
- **Single course for “Intro to CMMI” has been created**
 - **1st offering April 2005**
 - **New instructors are being trained in this single course**
 - **Existing instructors have received upgrade training**
 - **Staged and Continuous courses will be sunset December 2005**
- **Phased SCAMPI refinements will complement strategy**
- **Pilot the proposed V1.2 changes from Dec 05 - Feb 06**
- **Release V1.2 Summer 2006**
- **Sunset V1.1 after a suitable transition period**
- **Provide V1.2 upgrade training to V1.1 users**

Version 1.2 Changes ₁

- **Eliminate concept of advanced practices and common features**
- **Integrate ISM into SAM at Level 2**
 - **Eliminates SS (supplier sourcing) option**
- **Recognize, given hardware additions, that providing separate development model designations no longer useful**
 - **i.e. “CMMI-SE/SW”, “CMMI-SW”**
 - **“single book” approach (CMMI-DEV+IPPD)**
- **“Not applicable” process areas (PAs) for maturity levels no longer an option except for SAM**

Version 1.2 Changes ₂

- Clarify material based on 1000+ Change Requests (e.g., improve high maturity verbiage)
- Work environment material added to OPD and IPM
- Glossary improved (e.g., higher level management, bidirectional traceability, subprocess)
- Overview text improved
- IPPD coverage consolidated and simplified

Integrated Product and Process Development (IPPD) Changes

IPPD material is being revised significantly.

- Organization Environment for Integration PA removed and material moved to Organizational Process Definition (OPD) PA.
- Integrated Teaming PA removed and material moved to Integrated Project Management (IPM) PA.
- IPPD goals in the IPM PA have been consolidated.
 - apply IPPD Principles
 - reflects the revised content
- Overall material condensed and revised to be more consistent with other PAs.

SCAMPI A Changes Being Considered for V1.2

Method implementation clarifications

- interviews in “virtual” organizations
- practice characterization rules
- organizational unit sampling

Appraisal Disclosure Statement (ADS) improvements

- Add clarifying content to better describe organizational and project scope and coverage
- reduce redundancy with other appraisal documents
- improve usability for sponsor and government
- require sponsor’s signature on the ADS

Establish maturity level and capability level “shelf life” – 3 years

CMMI “Shelf Life” or expiration date

V1.1 appraisals will be valid for three years from the time of completion, or one year after V1.2 release, whichever is longer.

- **V1.1 appraisal results must be reported within nine months of appraisal completion.**
- **V1.1 appraisals will be accepted as valid through December 2007.**
- **Any appraisal using either the V1.1 model or the V1.1 method is considered a V1.1 appraisal.**
- **The SEI will provide notification of appraisal age at the two year point.**

Beyond V1.2 ₁

Improved architecture will allow post-V1.2 expansion.

- **Extensions of the life cycle (Services, Acquisition & Outsourcing) could expand use of a common organizational framework:**
 - allows coverage of more of the enterprise or potential partnering organizations
 - adapts model features to fit non-developmental efforts (e.g., CMMI Services, CMMI Acquisition)
- **Created concept of CMMI “constellations” to accommodate the expansion**

Beyond V1.2 ₂

First two constellations, CMMI Services and CMMI Acquisition, have been authorized by CMMI Steering Group. Development will be in parallel with V1.2 effort; publication sequenced after V1.2 rollout.

Northrop-Grumman is leading industry group for CMMI Services.

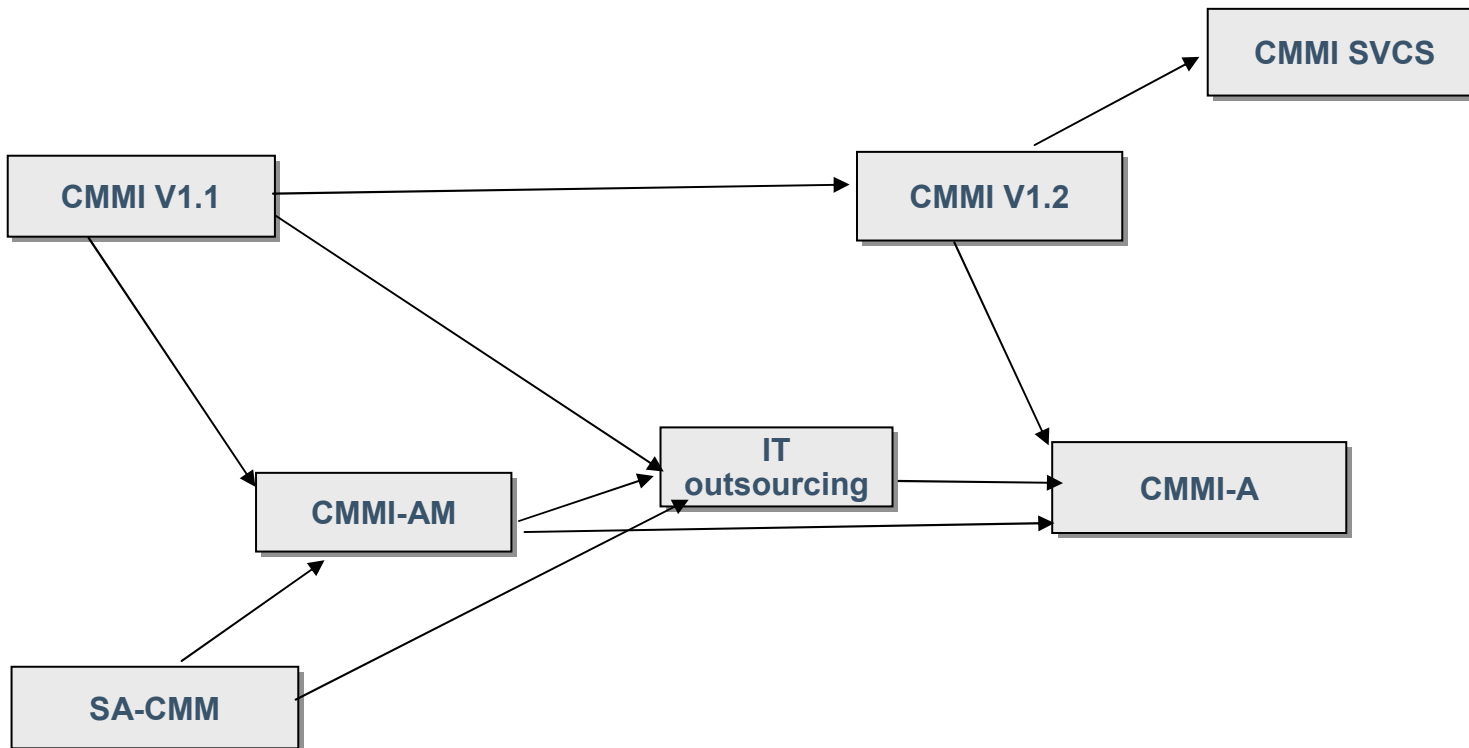
- **Initial focus will be for organizations providing “DoD services” as well as internal IT:**
 - **e.g. aircraft maintenance**
 - **Network Management, IT Services**
 - **IV&V**

Beyond V1.2 ₃

SEI is coordinating requirements elicitation for CMMI Acquisition.

- **Collecting government needs and perspectives from both DoD and civil agencies**
- **Will build upon existing CMMI Acquisition Module (CMMI-AM) plus an initial effort to develop an IT outsourcing model (also based on CMMI-AM)**

Planned Sequence of Models



Topics

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➔ Summary

Summary

Close to 1000 appraisals have been reported since the SCAMPI Class A Version 1.1 release.

CMMI continues to experience world-wide adoption.

- **At this time, approximately 40,000 people will have taken the Introduction to CMMI course**
- **Appraisals reported in 13 countries for the first time**

CMMI V1.2 is nearing the piloting phase and will be available in the upcoming year.

CMMI constellations have been commissioned by the CMMI Steering Group.