



Carnegie Mellon  
Software Engineering Institute

# Process Maturity Profile

## CMMI<sup>®</sup> For Development SCAMPI<sup>SM</sup> Class A Appraisal Results 2008 End-Year Update

March 2009

We could not produce this report without the support of the organizations and lead appraisers who reported their appraisal results to the SEI<sup>SM</sup>.

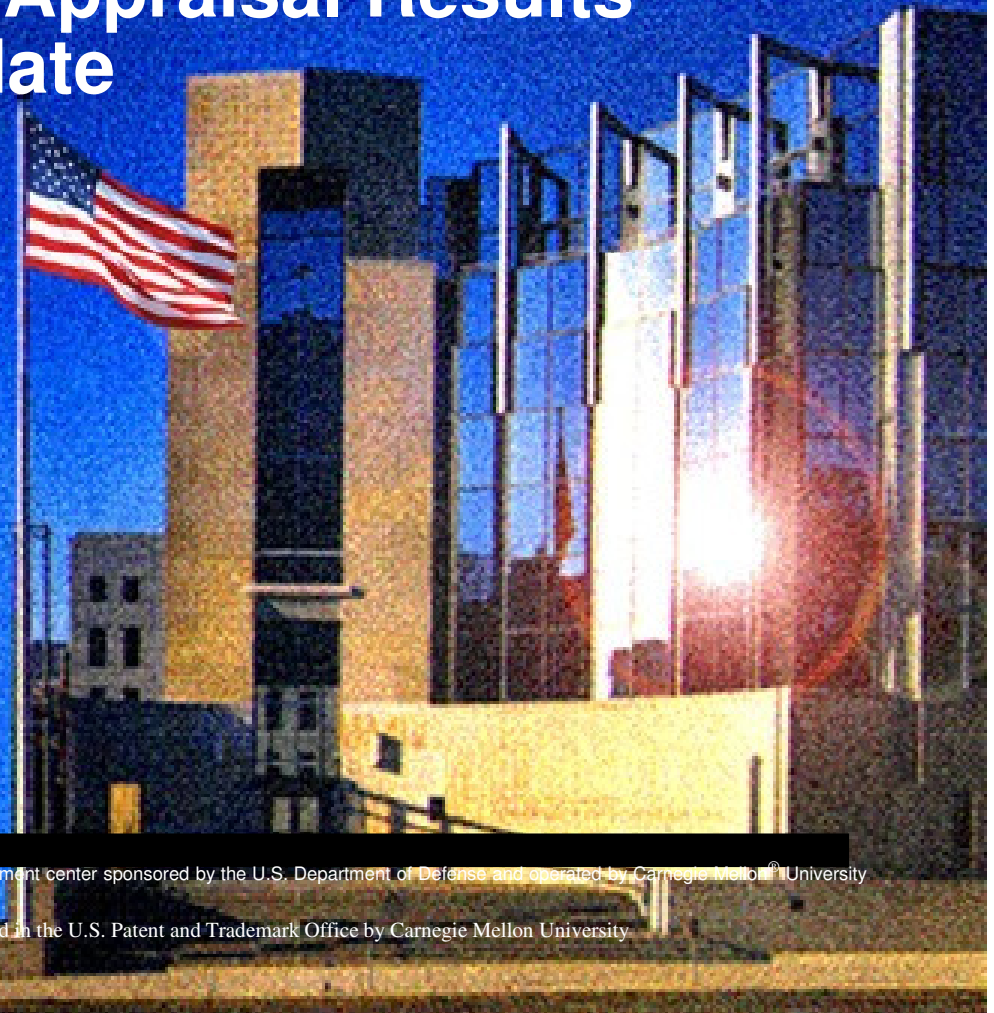
Our many thanks for their continuing cooperation with our data collection and analysis efforts.

CMMI Appraisal Program

The Software Engineering Institute is a federally funded research and development center sponsored by the U.S. Department of Defense and operated by Carnegie Mellon<sup>®</sup> University

® CMMI, Capability Maturity Model and Carnegie Mellon are registered in the U.S. Patent and Trademark Office by Carnegie Mellon University  
SM SCAMPI and SEI are service marks of Carnegie Mellon University

© 2009 by Carnegie Mellon University



# Report Documentation Page

Form Approved  
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE <b>MAR 2009</b>		2. REPORT TYPE		3. DATES COVERED <b>00-00-2009 to 00-00-2009</b>	
4. TITLE AND SUBTITLE <b>CMMI For Development SCAMPISM Class A Appraisal Results 2008 End-Year Update</b>				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) <b>Carnegie Mellon University, Software Engineering Institute, Pittsburgh, PA, 15213</b>				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT <b>Approved for public release; distribution unlimited</b>					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT <b>unclassified</b>	b. ABSTRACT <b>unclassified</b>	c. THIS PAGE <b>unclassified</b>			



# Outline

## Introduction

## Current Status

## Community Trends

## Organizational Trends

## Summary And Terms used in this Briefing

## How to Report your Appraisal Results to the SEI

This briefing is based solely on the appraisals reported to the SEI. It cannot be used as a source for an exact indicator of all organizations in the world using CMMI models or appraisal methods nor can it be used for certification or verification purposes.

The SEI does not certify appraisal results or organizations. The SEI licenses SEI Partners, authorizes/certifies lead appraisers, team leaders and high maturity lead appraisers to conduct appraisals. Neither the SEI nor any other organization is a “certifying authority” of the results from a SCAMPI appraisal. Therefore requests to the SEI to provide information to be used for this purpose can not be fulfilled. Information provided by the SEI, such as this briefing, is to demonstrate reported results of the use of CMMI products and services only.

Organizations performing source selection or verification should consider performing an evaluation appraisal. For more information on appraisal methods and for a directory of authorized lead appraisers who can perform them, visit:

<http://www.sei.cmu.edu/appraisal-program/>



# Introduction: Purpose

**Characterize the adoption of CMMI® - DEV**

**Describe results from Standard CMMI Appraisal Method for Process Improvement (SCAMPI<sup>SM</sup>) v1.1/v1.2 Class A appraisals using Capability Maturity Model® Integration (CMMI-SE/SW/IPPD/SS v1.1 or CMMI - DEV v1.2) \***

**Encourage continued reporting of results**

\* Organizations previously appraised against CMMI v1.0 and which have not reappraised against v1.1 or v1.2 are not included in this report

Please visit: <http://www.sei.cmu.edu/appraisal-program/profile/index.html> for additional information or questions you may have about this briefing before contacting the SEI directly



# Introduction - 2: Briefing Contents

This briefing includes three primary sections:

- 1. Current Status**
  - Snapshot of the software community based on the most recent appraisal, since 2002, of reporting organizations
- 2. Community Trends**
  - Global distribution of appraisals
  - Growth in the number of appraisals performed
  - Shifts in the maturity profile over time
- 3. Organizational Trends**
  - Analysis of Process Area (PA) satisfaction
  - Time to move up in maturity based on change in maturity level and time between appraisals



# Current Status

**SCAMPI v1.1/v1.2 Class A appraisals conducted from the SCAMPI V1.1 April 2002 release through December 2008 and reported to the SEI by January 2009**

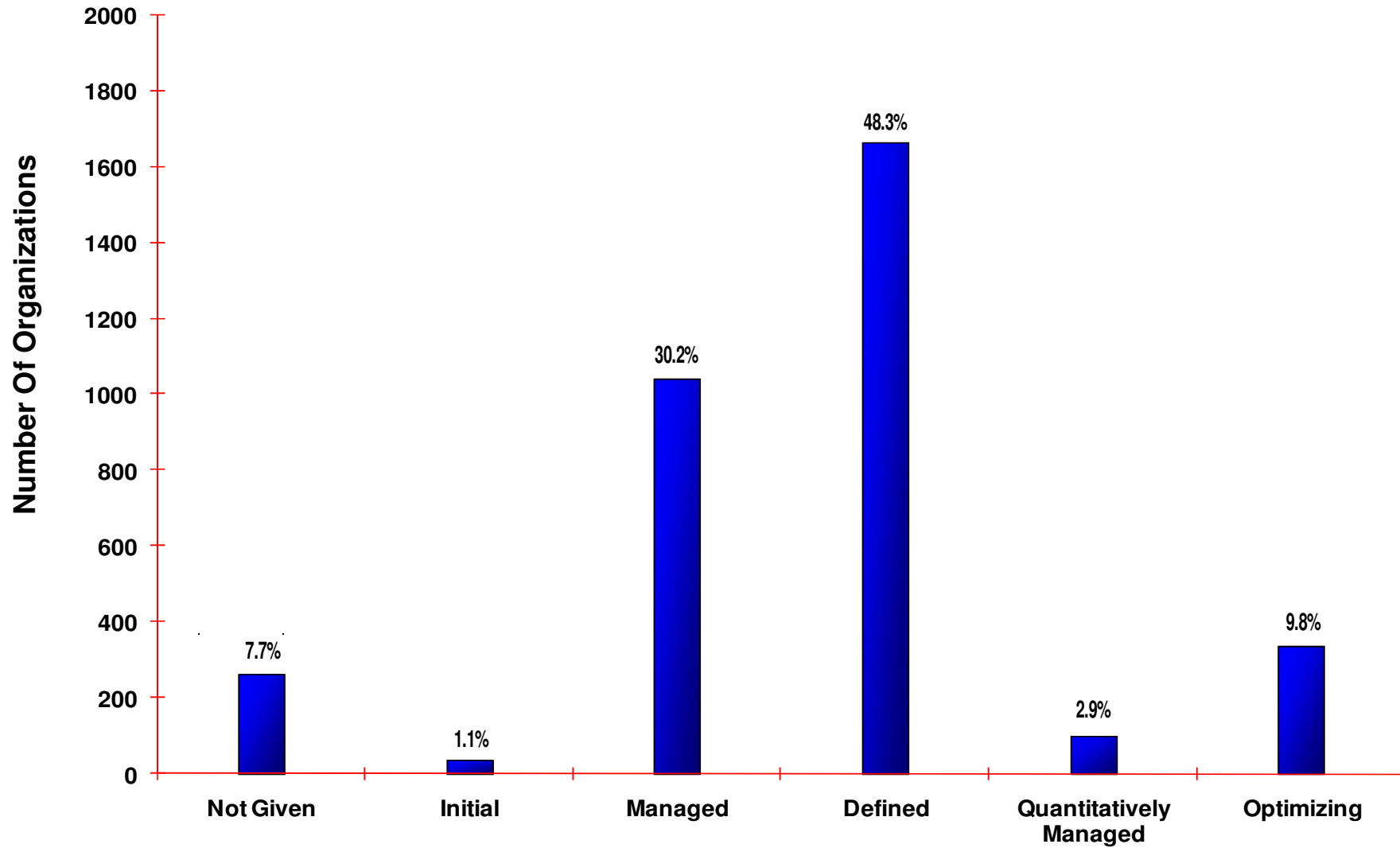
- **4,134 appraisals**
- **3,446 organizations**
- **2,544 participating companies**
- **564 reappraised organizations**
- **21,141 projects**
- **71.4% Non-USA organizations**

**Please refer to: Terms Used in this Report on page 29**

Additional charts providing different views and break down of this information will be added to this briefing as more appraisal data is reported to the SEI over time.



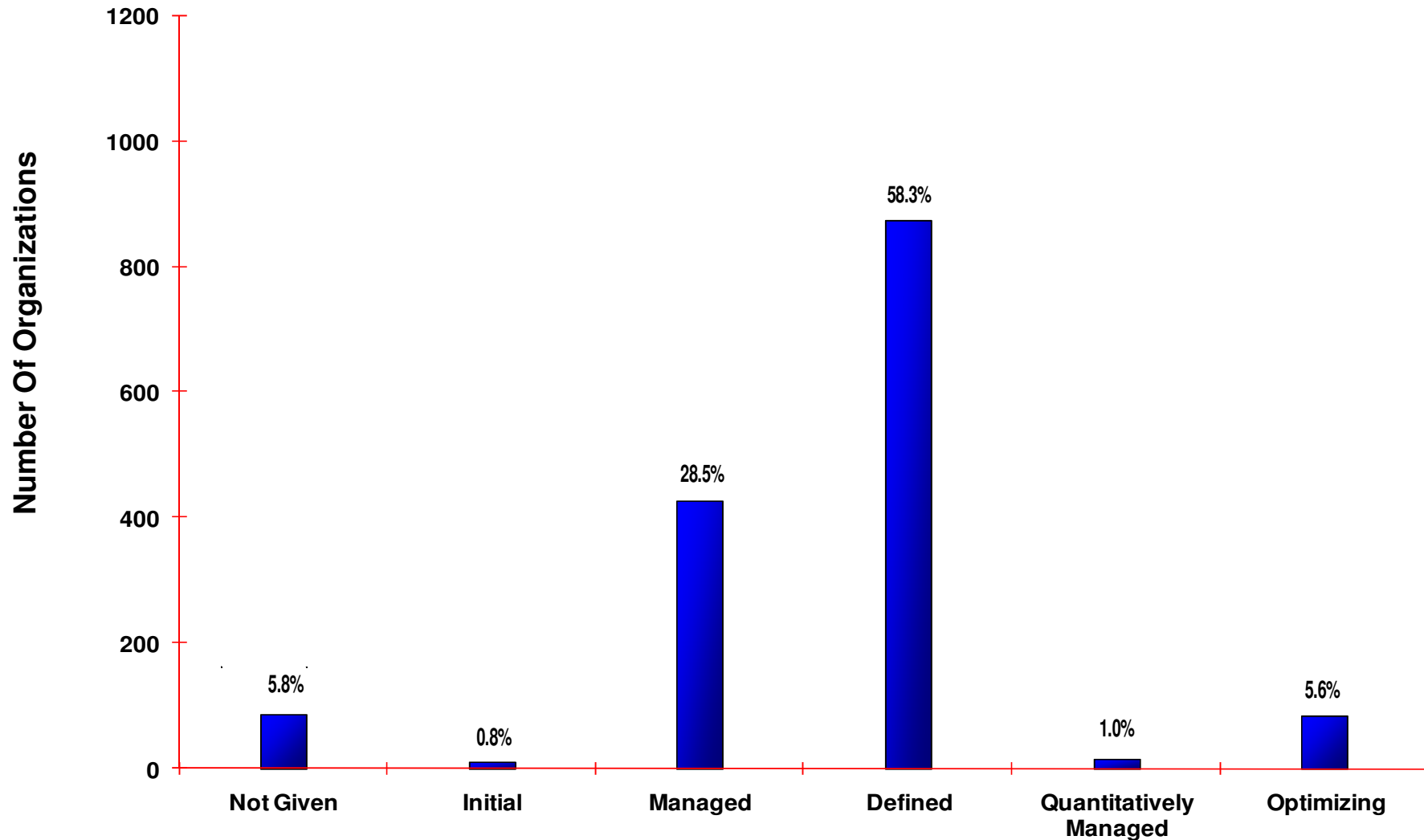
# Process Maturity Profile by All Reporting Organizations



Based on most recent appraisal of **3446** organizations



# Process Maturity Profile (V1.2 Only) by All Reporting Organizations

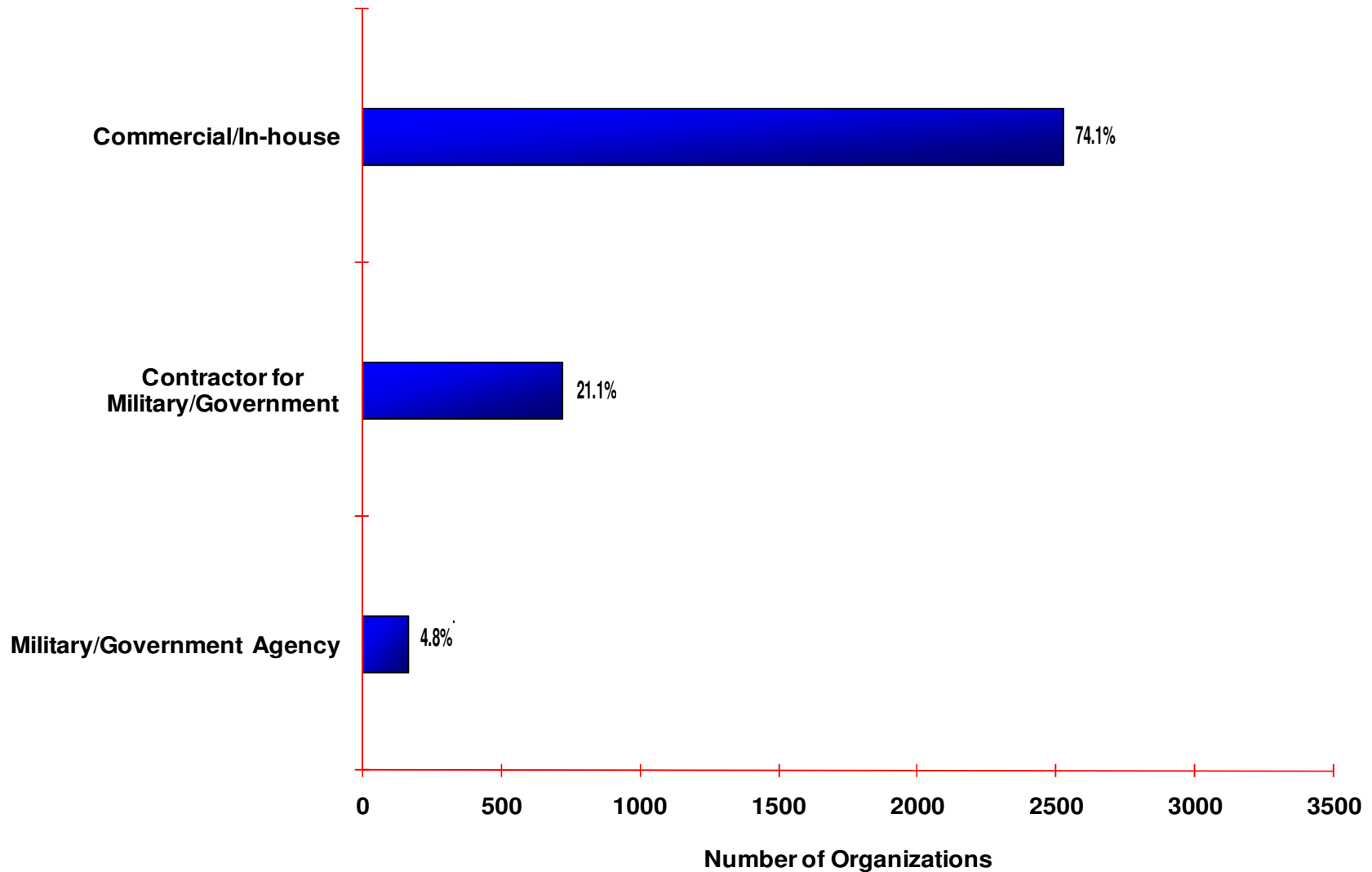


Based on most recent appraisal of 1500 organizations





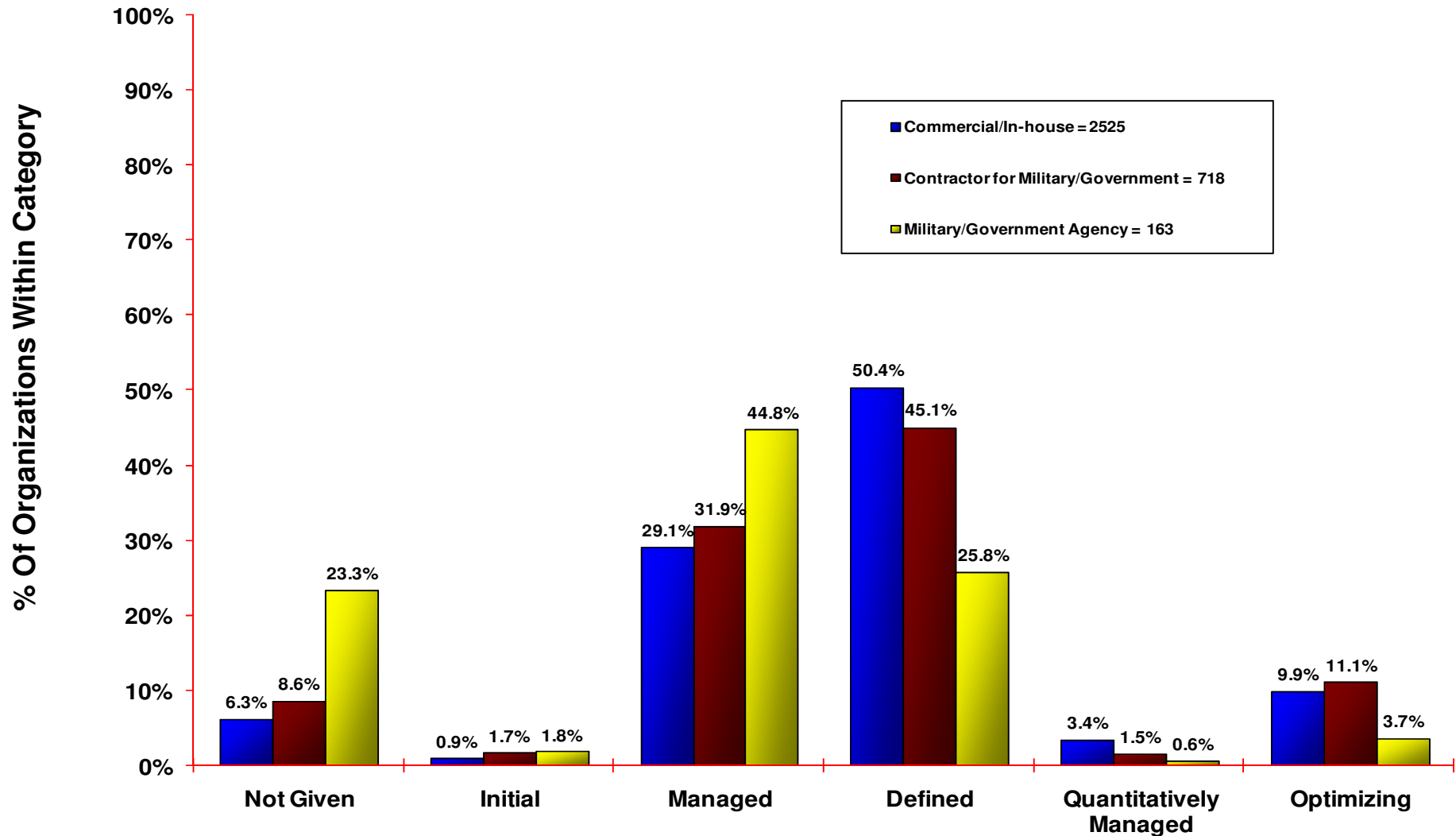
# Reporting Organization Categories



Based on 3446 organizations reporting an organization category



# Process Maturity Profile by Reporting Organization Categories

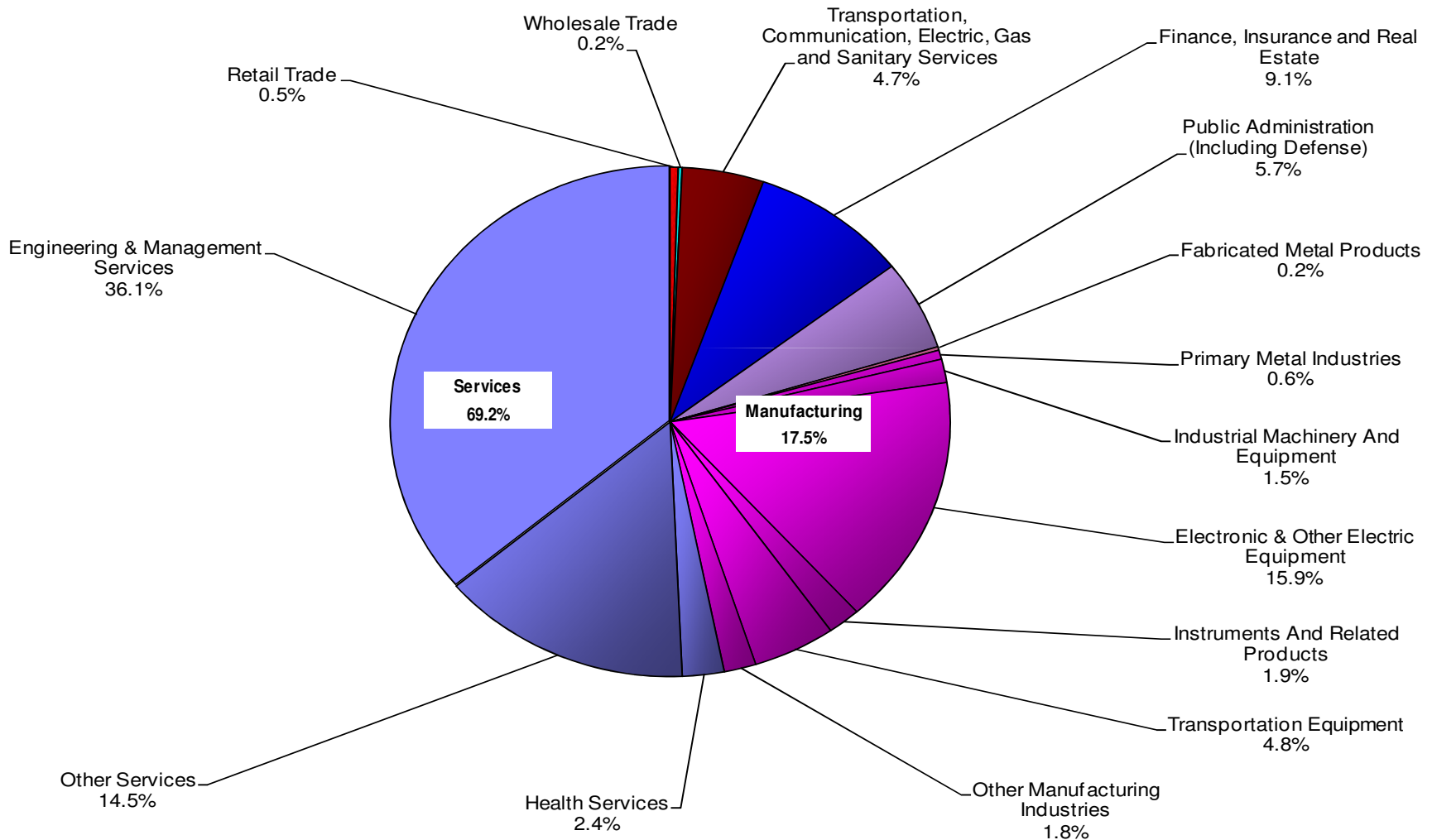


Based on most recent appraisal of 3406 organizations reporting an organization category



# Organization Type

Based on Primary Standard Industrial Classification (SIC) Code

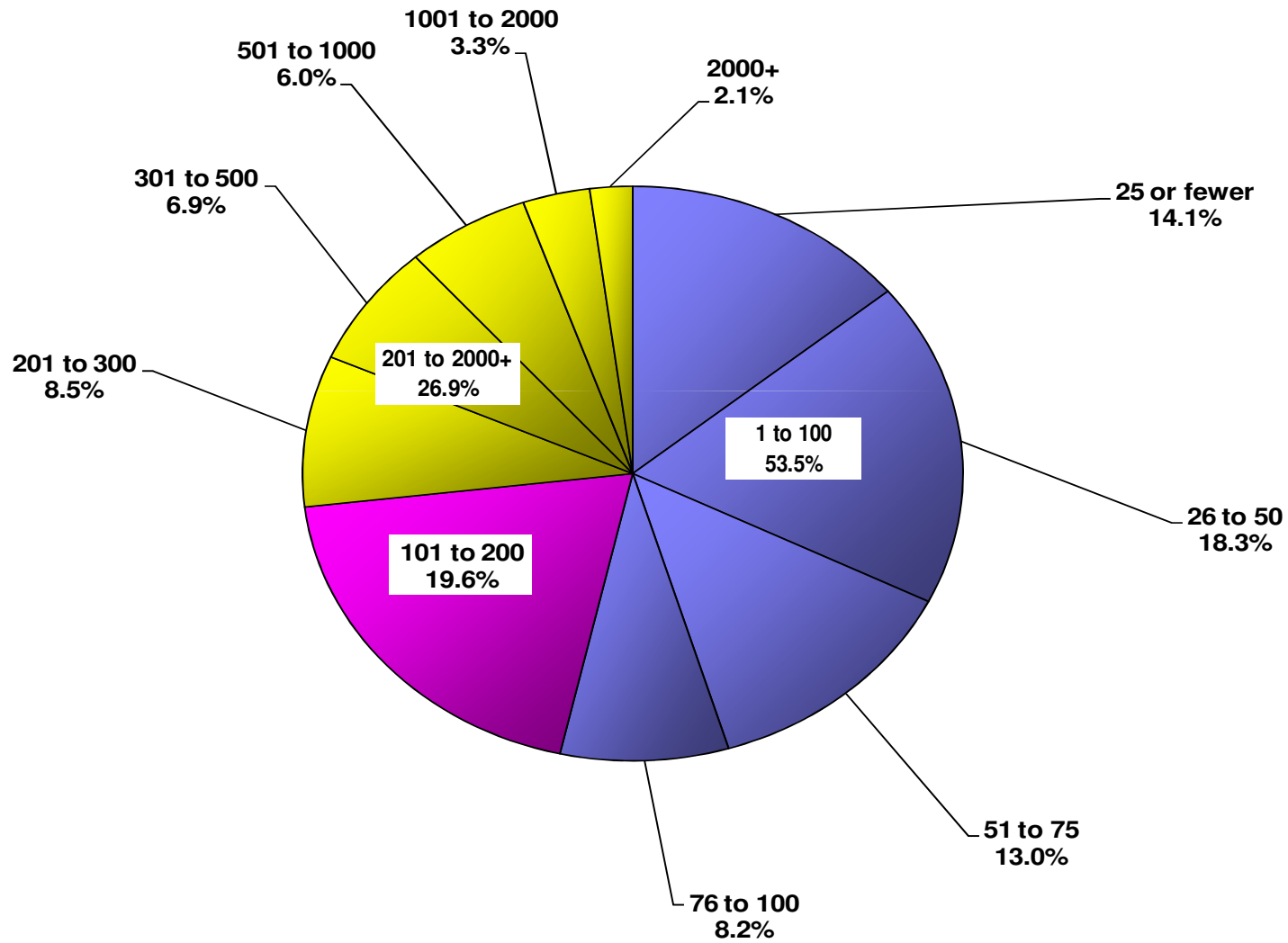


Based on 2652 organizations reporting SIC code. For more information visit: <http://www.osha.gov/oshstats/sicser.html>



# Organization Size

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

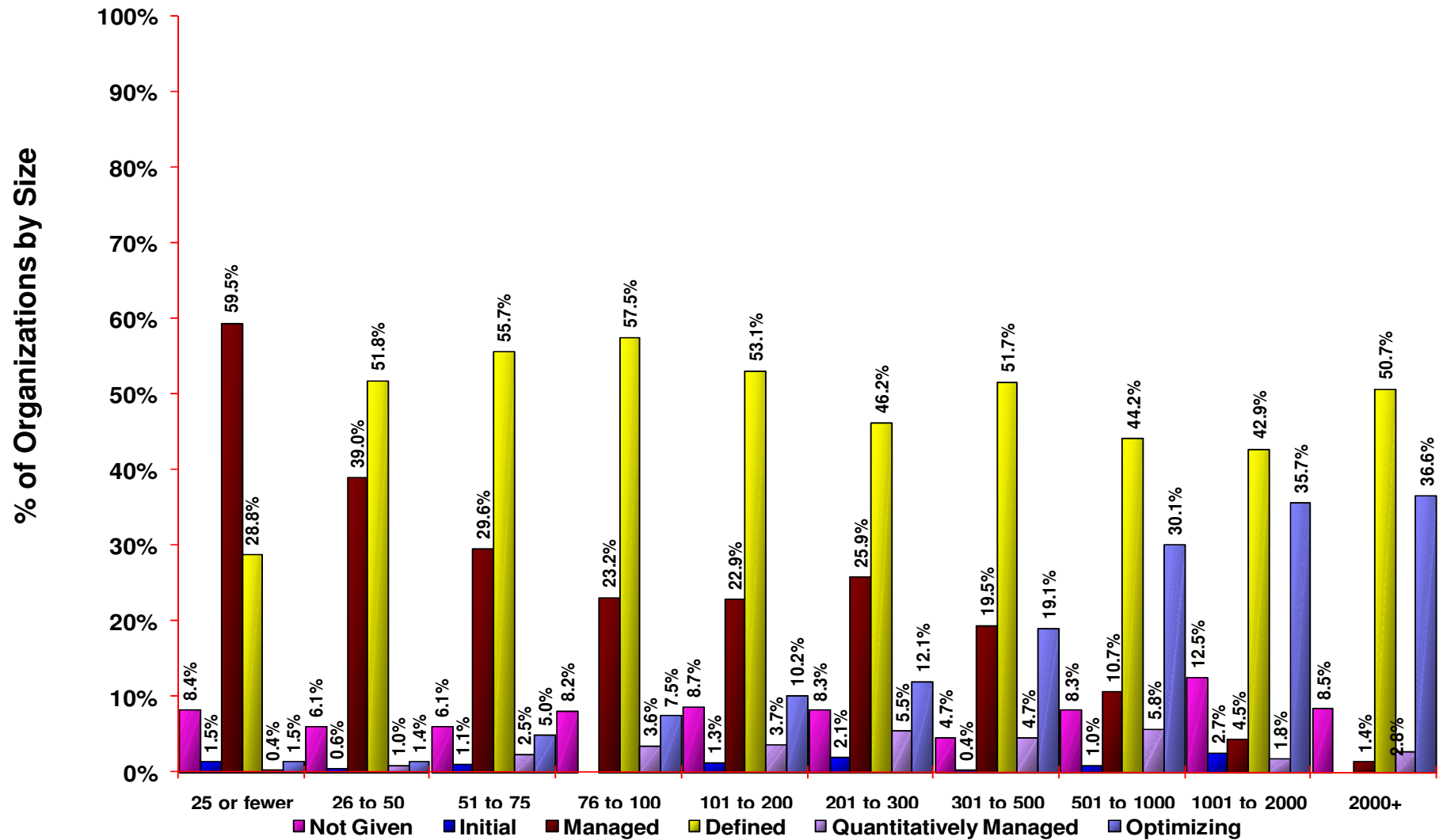


Based on 3407 organizations reporting size data



# Maturity Profile by Organization Size

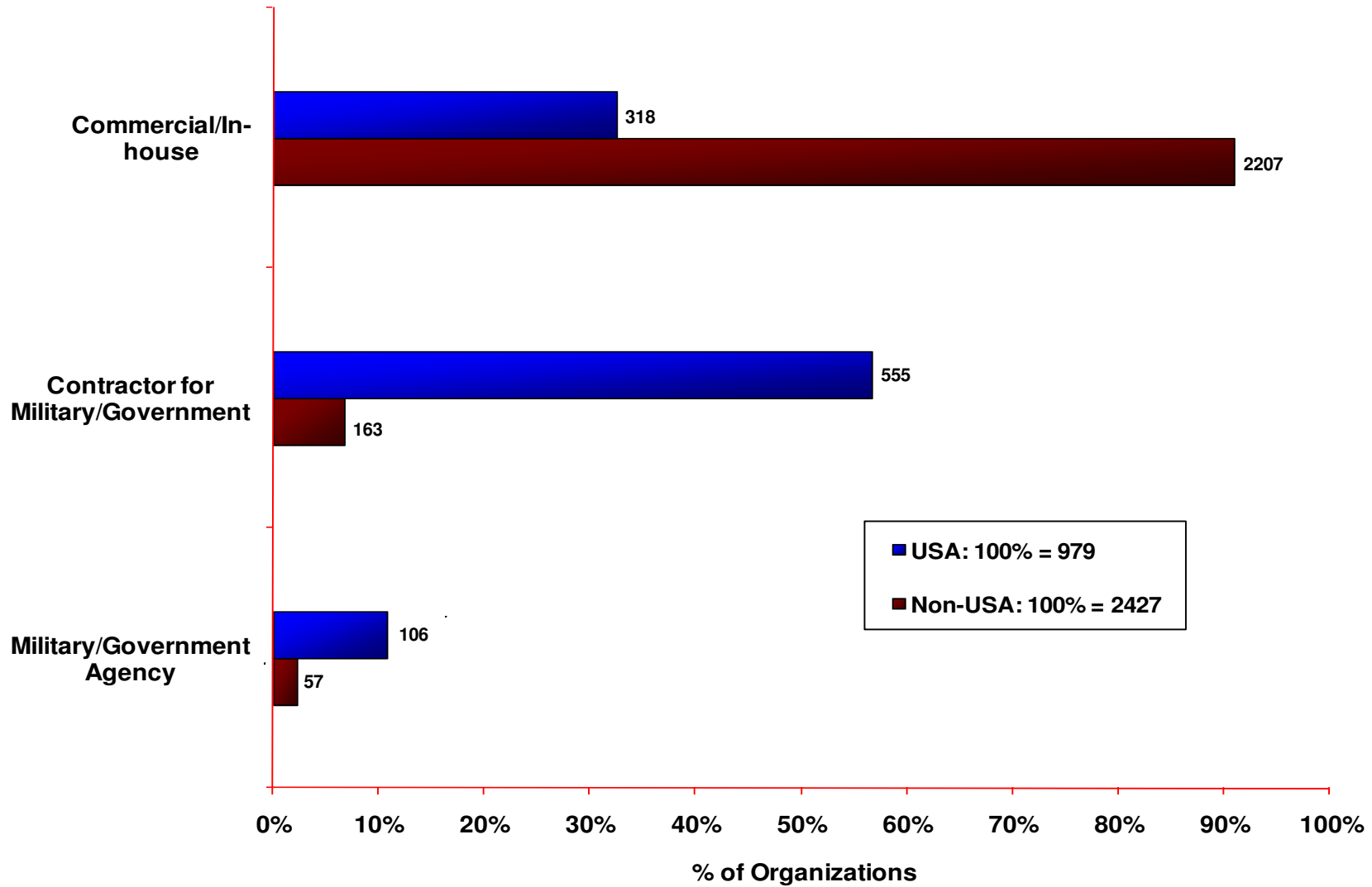
Based on the total number of employees within the area of the organization that was appraised



Based on 3407 organizations reporting size data



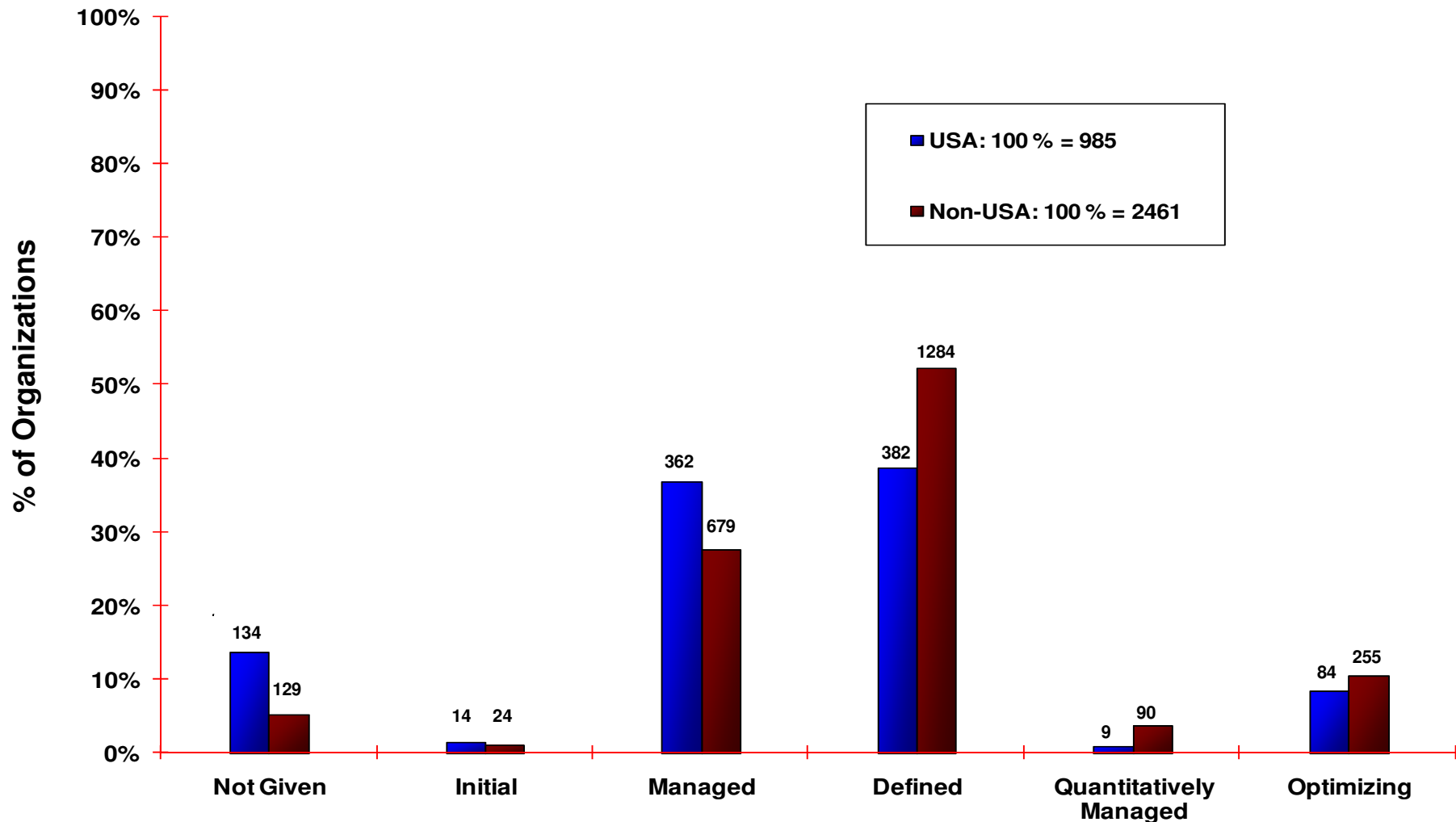
# USA and Non-USA Reporting Organization Categories



Based on 985 USA organizations and 2427 Non-USA organizations reporting an organization category



# Maturity Profile by All Reporting USA and Non-USA Organizations



Based on 985 USA organizations and 2461 Non-USA organizations



## Section 2: Community Trends

### Appraisals conducted through December 2008 and reported to the SEI

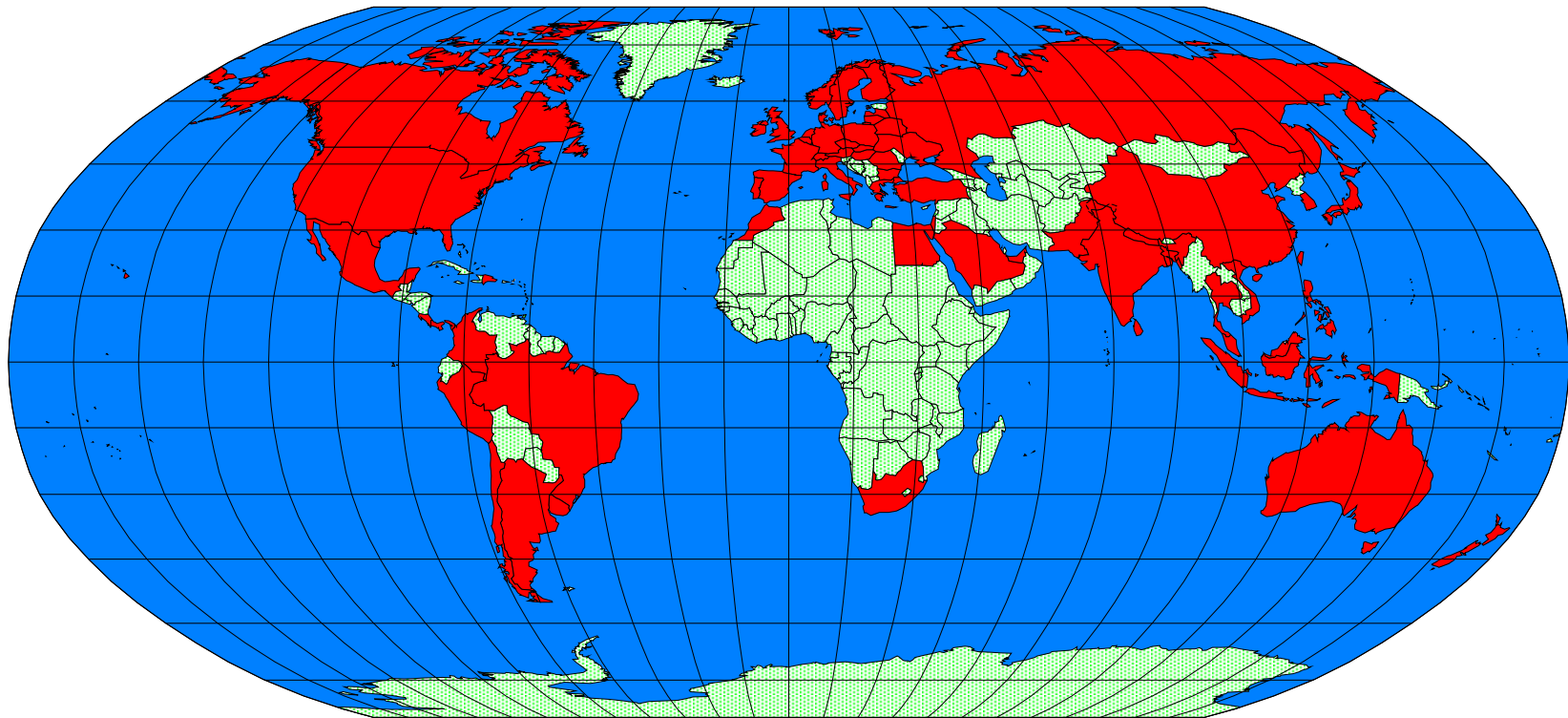
- **67 Countries reported appraisals**
  - most of the appraisals are from Asia and North America
- **3081 Appraisals were available on PARS**
  - the expired ones were removed and the reappraised were replaced by the newest appraisals

Please refer to: **Terms Used in this Report on page 29**





# Countries where Appraisals have been Performed and Reported to the SEI

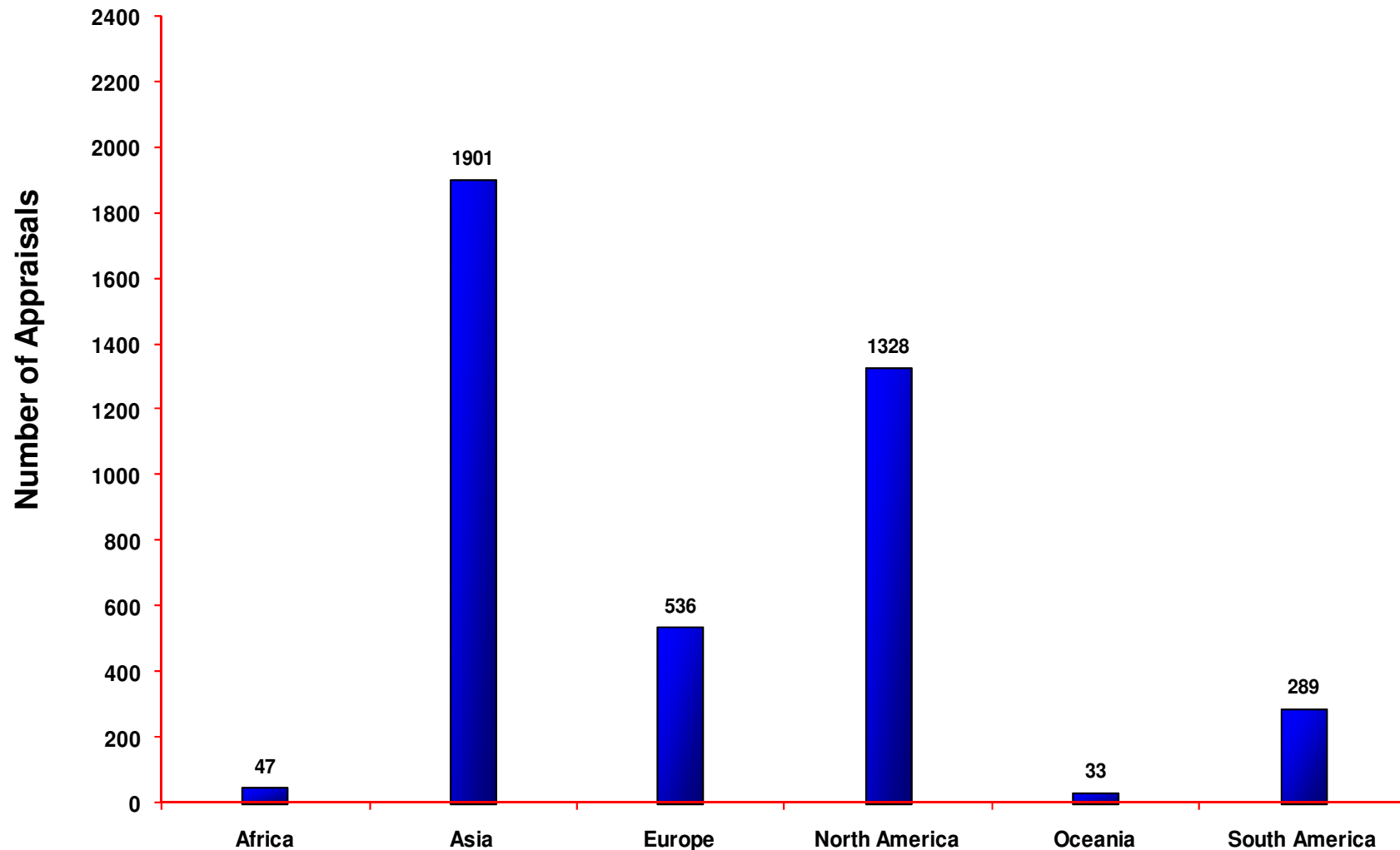


Argentina	Australia	Austria	Bahrain	Bangladesh	Belarus	Belgium	Brazil
Bulgaria	Canada	Chile	China	Colombia	Costa Rica	Czech Republic	Denmark
Dominican Republic	Egypt	Finland	France	Germany	Greece	Hong Kong	Hungary
India	Indonesia	Ireland	Israel	Italy	Japan	Korea, Republic Of	Latvia
Lithuania	Luxembourg	Malaysia	Mauritius	Mexico	Morocco	Nepal	Netherlands
New Zealand	Norway	Pakistan	Panama	Peru	Philippines	Poland	Portugal
Romania	Russia	Saudi Arabia	Singapore	Slovakia	South Africa	Spain	Sri Lanka
Sweden	Switzerland	Taiwan	Thailand	Turkey	Ukraine	United Arab Emirates	United Kingdom
United States	Uruguay	Viet Nam					

Red country name: New additions with this reporting



# Number of Appraisals Reported to the SEI by Continent



Based on 4134 appraisals

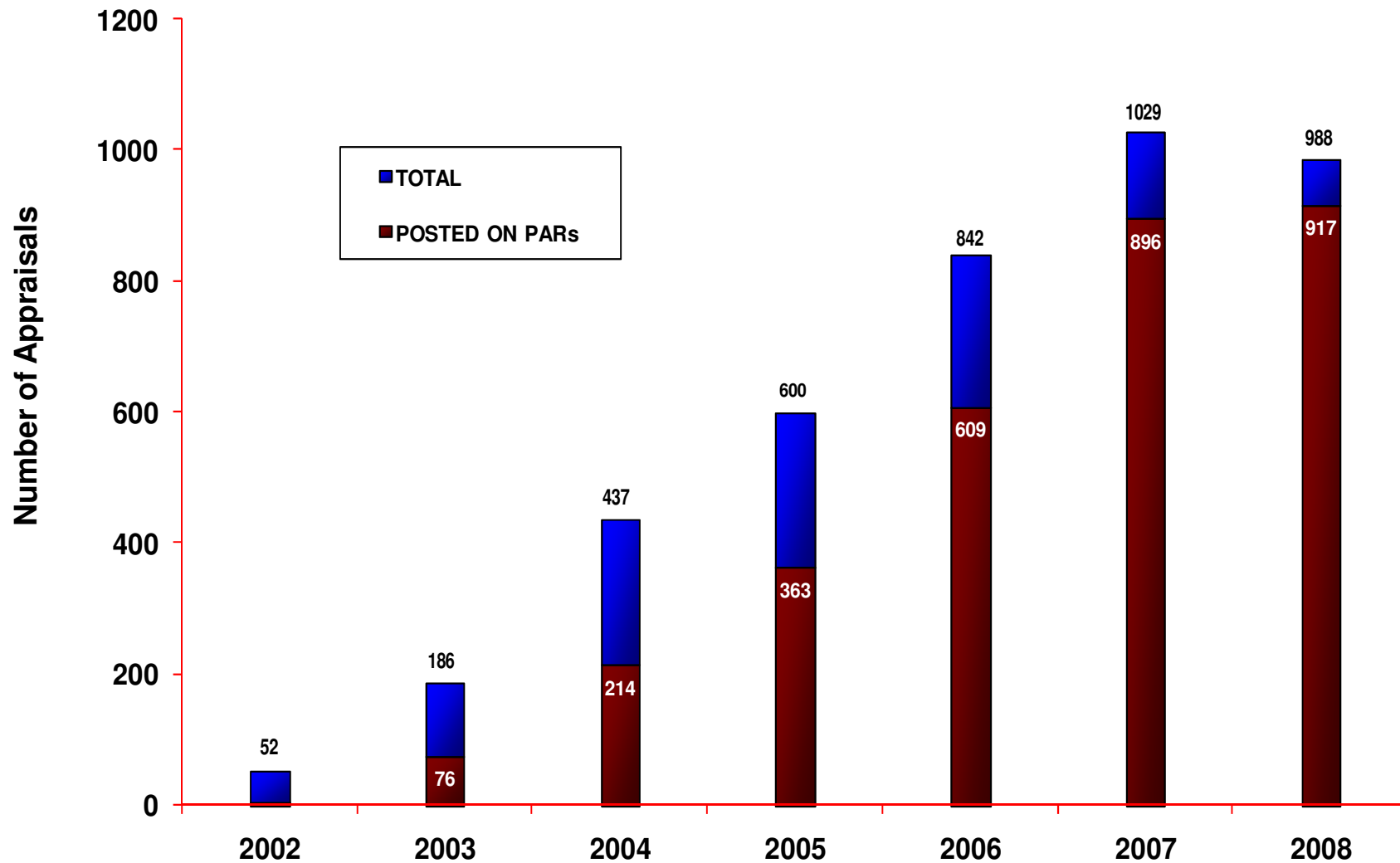


# Number of Appraisals and Maturity Levels Reported to the SEI by Country

Country	Number of Appraisals	Maturity Level 1 Reported	Maturity Level 2 Reported	Maturity Level 3 Reported	Maturity Level 4 Reported	Maturity Level 5 Reported	Country	Number of Appraisals	Maturity Level 1 Reported	Maturity Level 2 Reported	Maturity Level 3 Reported	Maturity Level 4 Reported	Maturity Level 5 Reported
Argentina	64		45	12	2	3	Malaysia	56		20	31		5
Australia	32	1	7	5	2	4	Mauritius	10 or fewer					
Austria	10 or fewer						Mexico	57		24	25	3	4
Bahrain	10 or fewer						Morocco	10 or fewer					
Bangladesh	10 or fewer						Nepal	10 or fewer					
Belarus	10 or fewer						Netherlands	10 or fewer					
Belgium	10 or fewer						New Zealand	10 or fewer					
Brazil	106	1	50	42	1	9	Norway	10 or fewer					
Bulgaria	10 or fewer						Pakistan	25	1	18	4		1
Canada	51	1	12	22	5	3	Panama	10 or fewer					
Chile	30		17	10		2	Peru	10 or fewer					
China	745	1	117	540	27	41	Philippines	21		2	11		7
Colombia	22		7	11	1	2	Poland	10 or fewer					
Costa Rica	10 or fewer						Portugal	10 or fewer					
Czech Republic	10 or fewer						Romania	10 or fewer					
Denmark	10 or fewer						Russia	10 or fewer					
Dominican Republic	10 or fewer						Saudi Arabia	10 or fewer					
Egypt	34	1	17	11	2	2	Singapore	19		3	10	1	4
Finland	10 or fewer						Slovakia	10 or fewer					
France	141	4	81	45	1	2	South Africa	10 or fewer					
Germany	64	9	32	11	1	1	Spain	105	1	60	35	2	4
Greece	10 or fewer						Sri Lanka	10 or fewer					
Hong Kong	18		2	11		5	Sweden	10 or fewer					
Hungary	10 or fewer						Switzerland	10 or fewer					
India	409		14	191	24	166	Taiwan	117	1	74	38		2
Indonesia	10 or fewer						Thailand	27		12	13		1
Ireland	10 or fewer						Turkey	14			12		2
Israel	17		3	10		2	Ukraine	10 or fewer					
Italy	31		14	14			United Arab Emirates	10 or fewer					
Japan	267	17	75	121	13	16	United Kingdom	93	3	42	30	1	3
Korea, Republic Of	138	1	47	61	13	7	United States	1272	27	448	462	21	124
Latvia	10 or fewer						Uruguay	10 or fewer					
Lithuania	10 or fewer						Viet Nam	12			9	1	2
Luxembourg	10 or fewer												



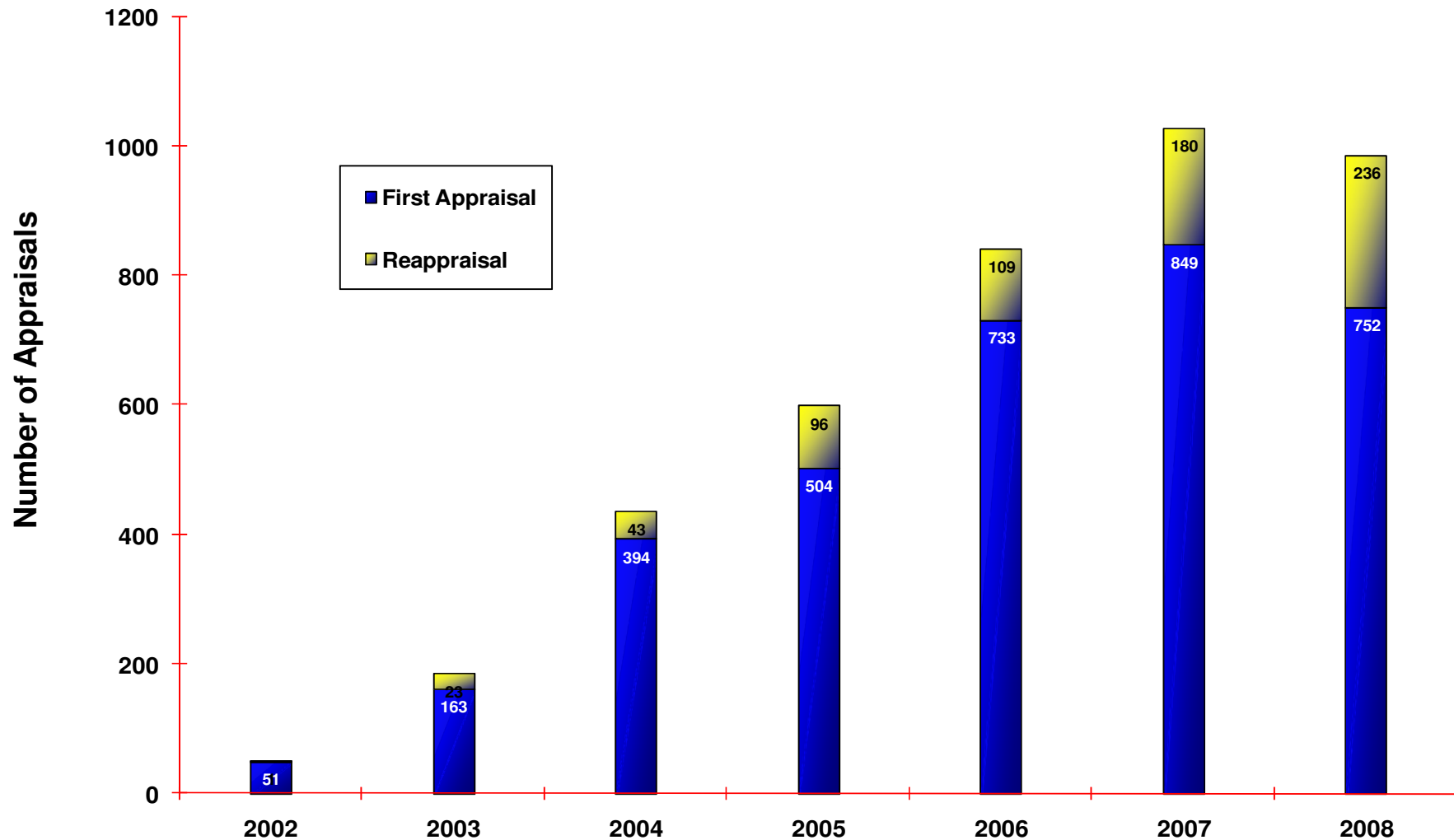
# Number of SCAMPI A Appraisals Reported to SEI by Year



Based on 4134 appraisals



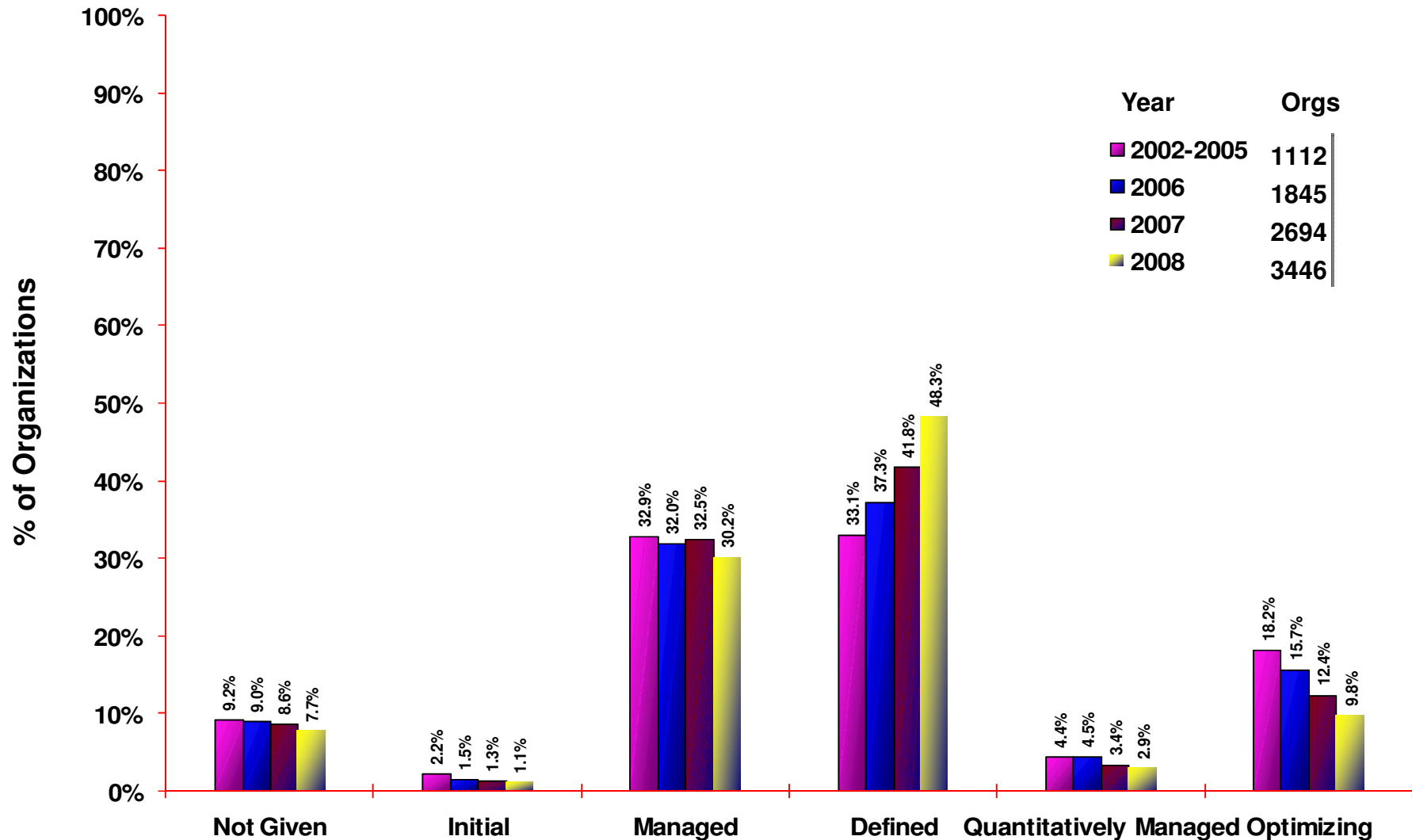
# Number of SCAMPI A Appraisals Reported to SEI by Year



Based on 4134 appraisals



# Trends in the Community Maturity Profile



Based on a cumulative view of the most recent appraisals of organizations up through the year indicated



## Section 3: Organizational Trends

**Appraisals conducted through December 2008 and reported to the SEI**

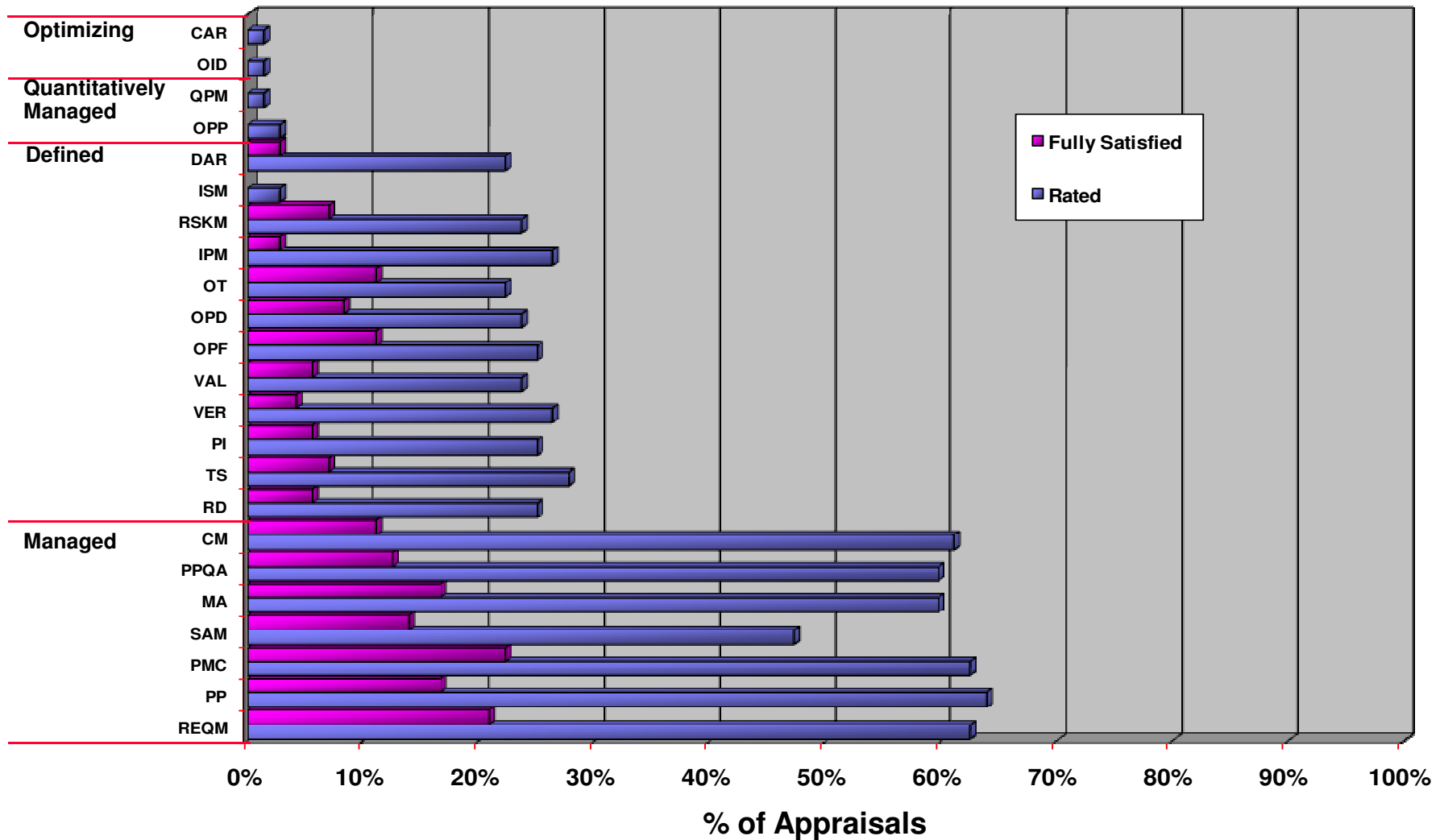
- **1289 Process Area (PA) profiles**
  - **satisfaction of PAs by maturity level for organizations appraised at levels 1 and 2**
- **564 reappraised organizations**
  - **accounting for 1,252 appraisals**
  - **although some organizations conducted multiple reappraisals, only the first and latest appraisals were used in creating the charts on pages 25**

**Please refer to: Terms Used in this Report on page 29**



# Process Area Profiles - 1

## Organizations Appraised at Maturity Level 1



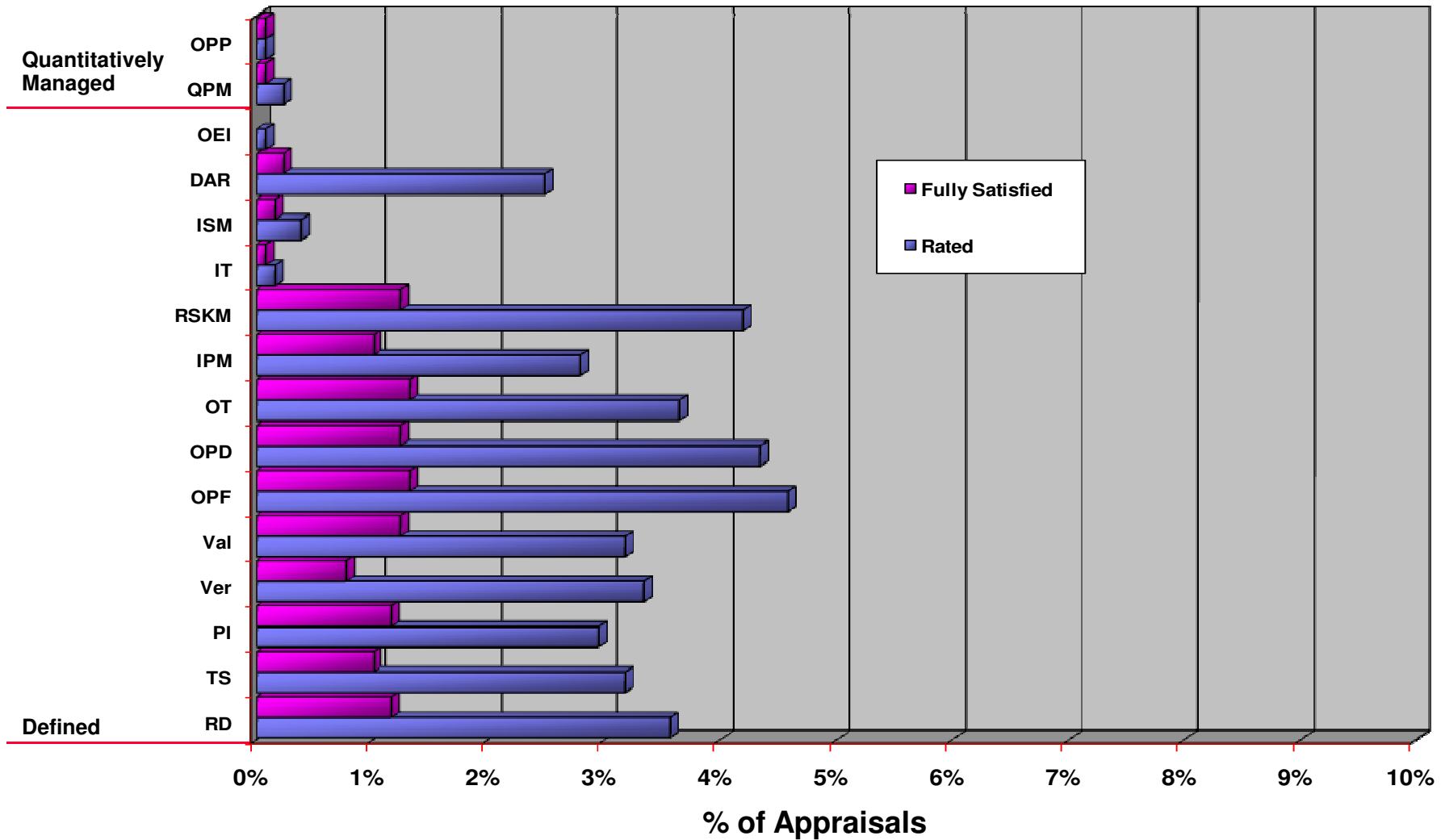
Based on 72 appraisals reporting a maturity level 1 rating





# Process Area Profiles - 2

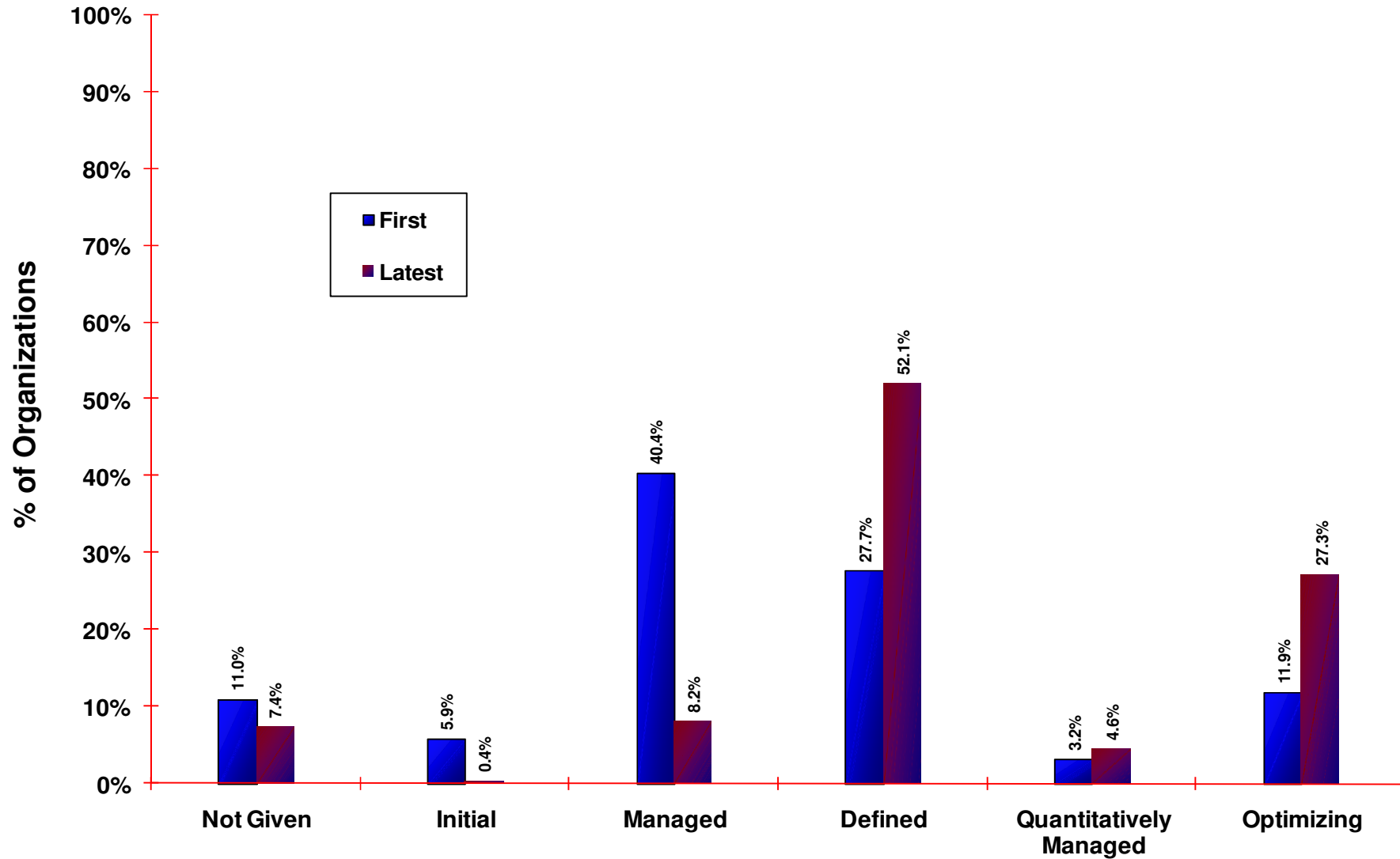
## Organizations Appraised at Maturity Level 2



Based on 1289 appraisals reporting a maturity level 2 rating



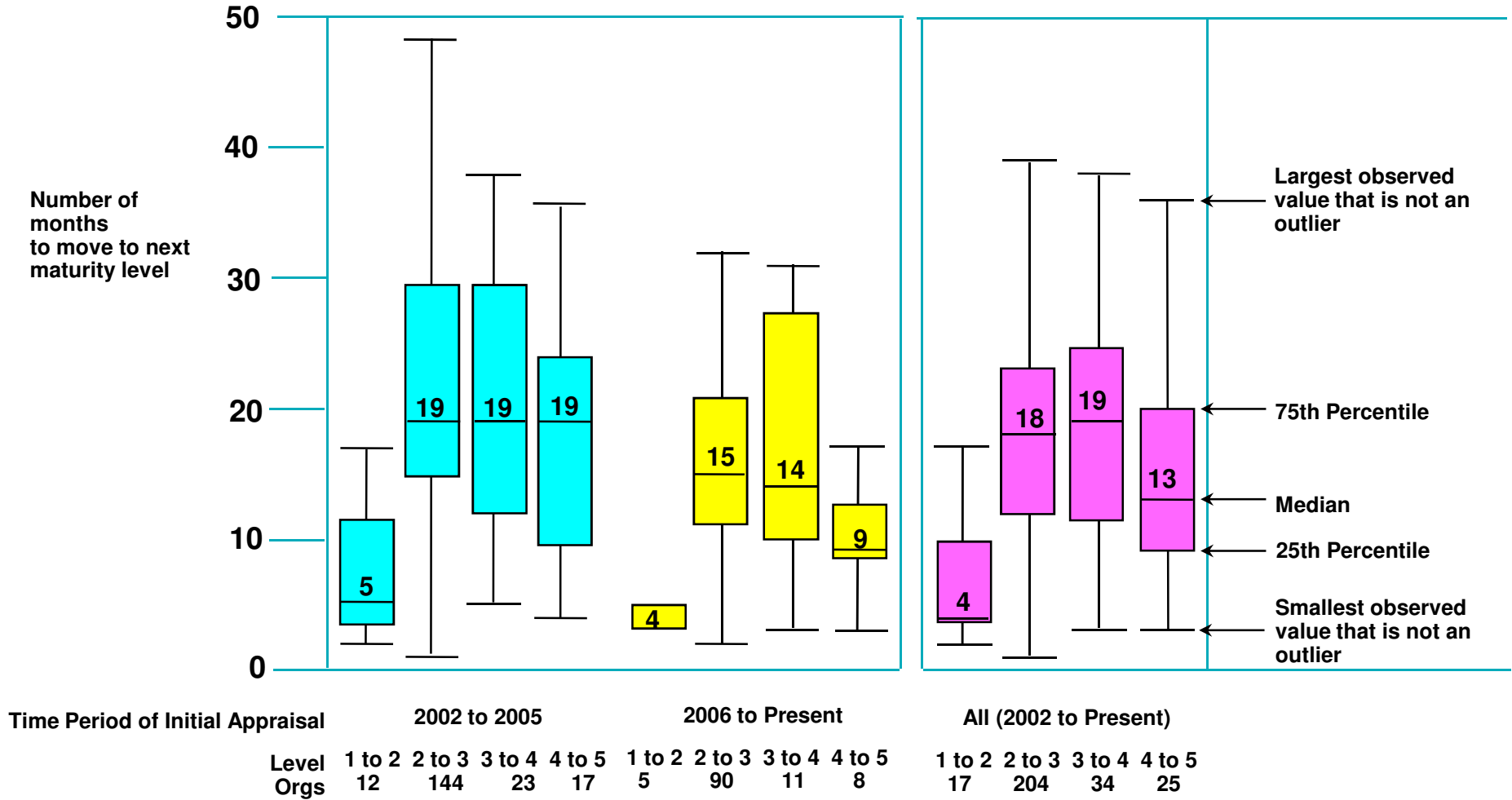
# Maturity Level of First and Latest Appraisal



Based on 564 reappraised organizations using their first and latest appraisal



# Time to Move Up





# Summary - 1

**4134 appraisals have been reported to the SEI in 82 months**

**The Organization Category of “Commercial/In-house” reports most of the appraisals**

**The highest percentage of “Commercial/In-house” reporting appraisals is from outside the USA**

**The highest percentage of “Military/Government Agency” reporting appraisals is from the USA**

**Outside the USA: China, India, Spain, Brazil, Thailand and France reported appraisals are increasing at a rapid rate**



## Summary - 2

**For organizations that began their CMMI-based SCAMPI effort in 2002 or later, the median time to move from:**

- **maturity level 1 to 2 is 4 months**
- **maturity level 2 to 3 is 18 months**
- **maturity level 3 to 4 is 19 months**
- **maturity level 4 to 5 is 13 months**

### **Note:**

**Since the September 2008 report, the median time to move from maturity level 2 to 3 increased from 17 months to 18 months, the median time to move from maturity level 3 to 4 increased from 15.5 months to 19 months, and the median time to move from maturity level 4 to 5 increased from 12.5 months to 13 months**



# Terms Used in this Report

- 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, or branch of service, etc.
- Organization** - a.k.a. 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.
- Non-USA** - Appraised entity whose geographic location is not within the United States. The parent of the appraised entity may or may not be based within the United States.
- PARS** - Published Appraisal Results webpage contains CMMI® appraisals published at the request of the appraisal sponsor.  
The link is: <http://sas.sei.cmu.edu/pars/>



# Report your Appraisal Results to the SEI

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

**In order to provide this information and service in the future, it will depend on this continued cooperation**

**Please visit:**

**<http://www.sei.cmu.edu/appraisal-program/profile/index.html>**

**for forms, information, and instructions on how to report appraisals to the SEI**



# Contact Information

Please visit:

<http://www.sei.cmu.edu/appraisal-program/profile/index.html>

and review the information provided before contacting:

SEI Customer Relations	(412) 268-5800
SEI FAX number	(412) 268-5758

Internet Address  
customer-relations@sei.cmu.edu

Mailing Address  
Customer Relations  
Software Engineering Institute  
Carnegie Mellon University  
Pittsburgh, PA 15213-3890