ISO/IEC JTC1/SC7
Software and Systems Engineering
Secretariat: CANADA (SCC)

ISO/IEC JTC1/SC7 /N3758

2007-06-26

Document Type	Report
Title	SC7 Chairman Presentation to the SC7 Plenary, Moscow, 2007-05-21
Source	SC7 Chairman
Project	
Status	Final
Reference	
Action ID	FYI or ACT
Distribution	AG
No. of Pages	27
Note	

Address reply to: ISO/IEC JTC1/SC7 Secretariat
École de technologie supérieure – Department of Software and IT Engineering
1100 Notre Dame Ouest, Montréal, Québec Canada H3C 1K3
secretariat@jtc1-sc7.org

www.jtc1-sc7.org

ISO/IEC JTC 1/SC7

PLENARY MEETING

Москва, 2007-05-21

SC7 Chairman Presentation

François Coallier
chair@jtc1-sc7.org
francois.coallier @etsmtl.ca

ISO JTC1 IEC
INFORMATION TECHNOLOGY STANDARDS

Université du Québec
École de technologie supérieure
Department of Software and IT Engineering

Content

- History
- Chairman's theme for Moscow
- Context
- Directions
- Terms of References
- Exploratory Work in Progress
- AG Meeting Action Items

History

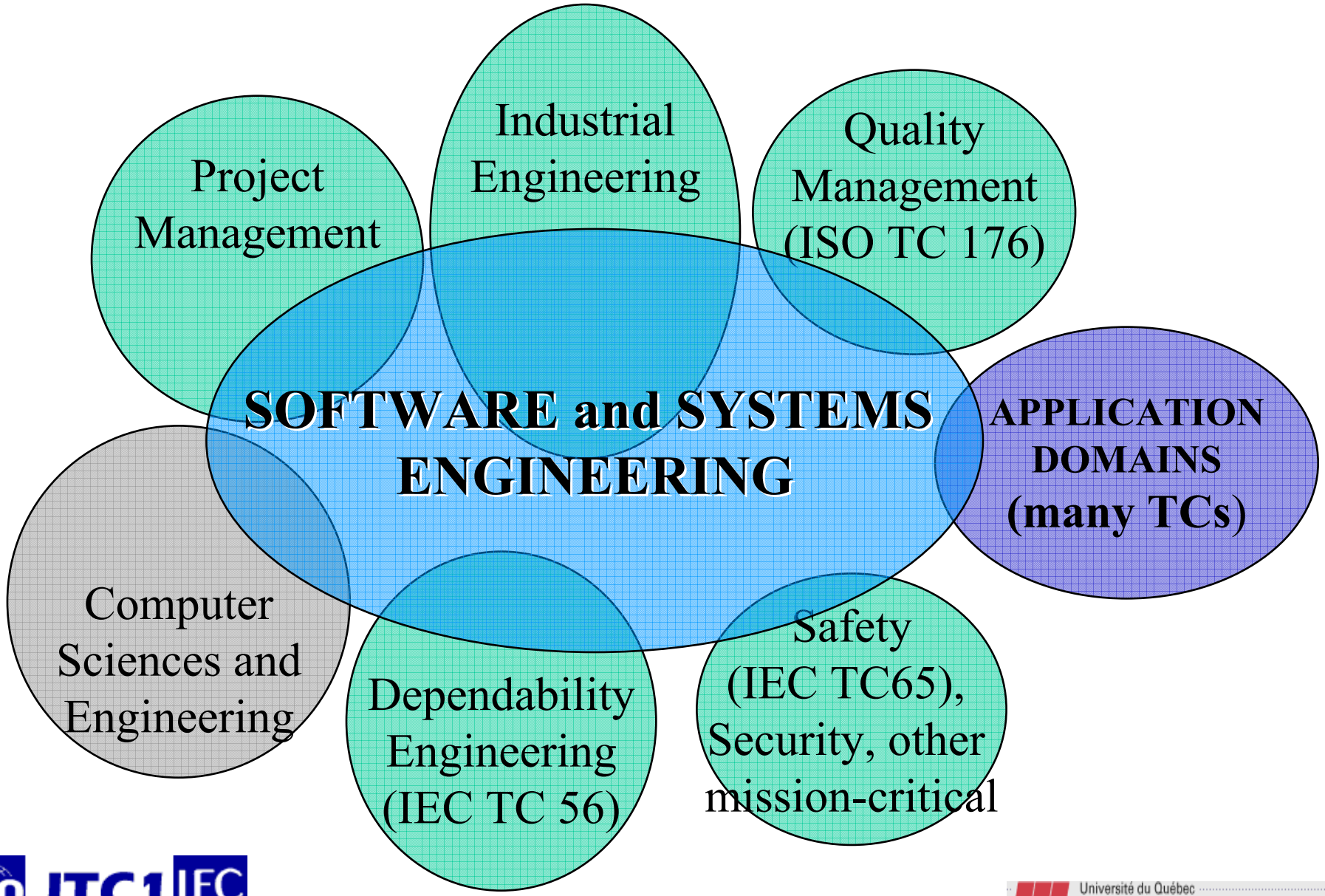
SC7 History

- 1987 - Formation of JTC1/ SC7
- 1990 - First Business Plan published
- 1991:
  - Name changed to Software Engineering
  - Publication of ISO/IEC 9126
- 1995 - Publication of ISO/IEC 12207
- 1997:
  - Terms of references broadened to Software Systems
  - First Business Planning Workshop
  - Vocabulary and BPG SWG established
- 1998:
  - Transfer of ODP and E-LOTOS projects from SC33
  - Process architecture
- 2000 - Name changed to *Software and System Engineering*
- 2005 – Publication of ISO/IEC 20000

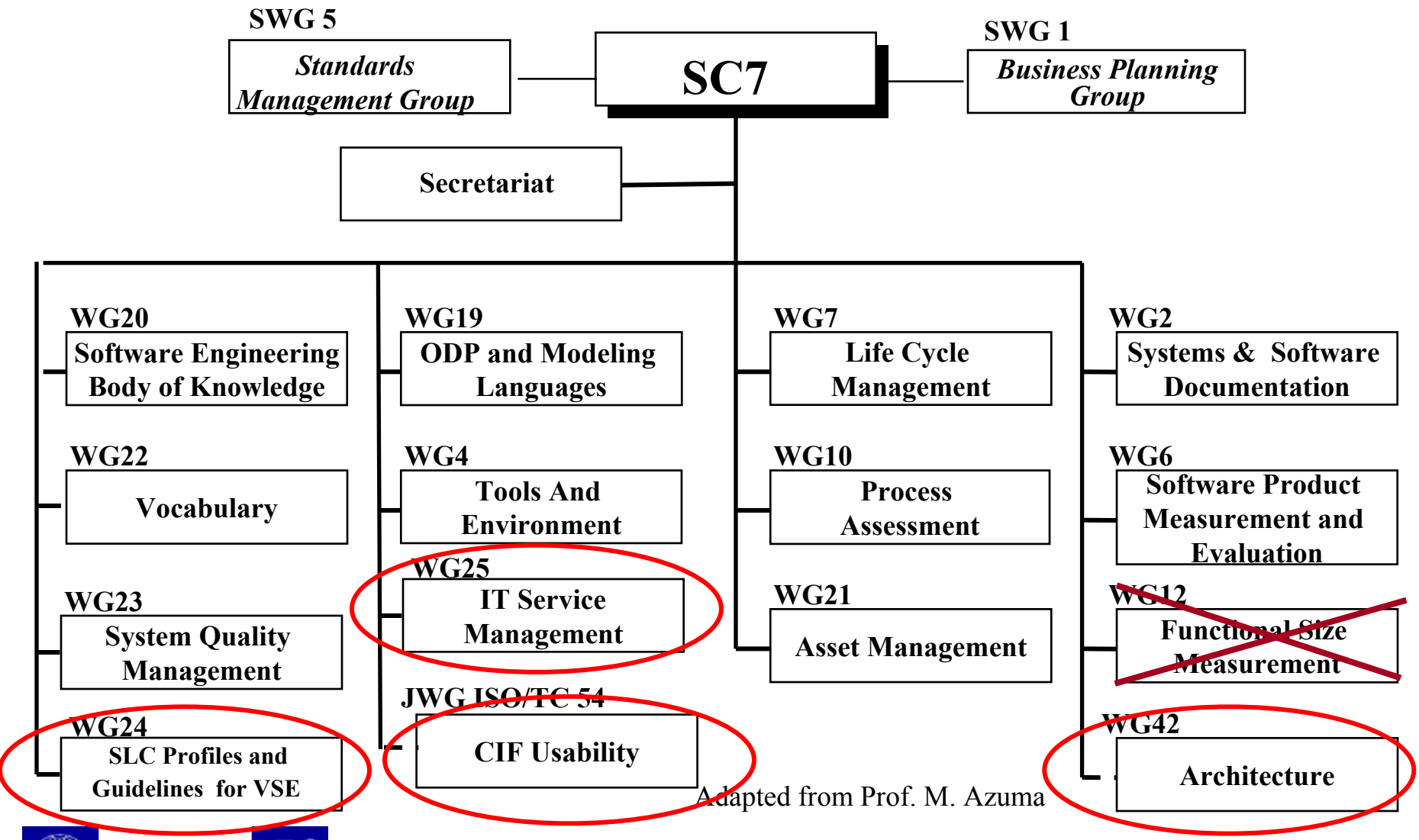
SC7 TERMS OF REFERENCE

Standardization of processes, supporting tools and supporting technologies for the engineering of software products and systems

JTC 1/SC7 Is an Horizontal Committee

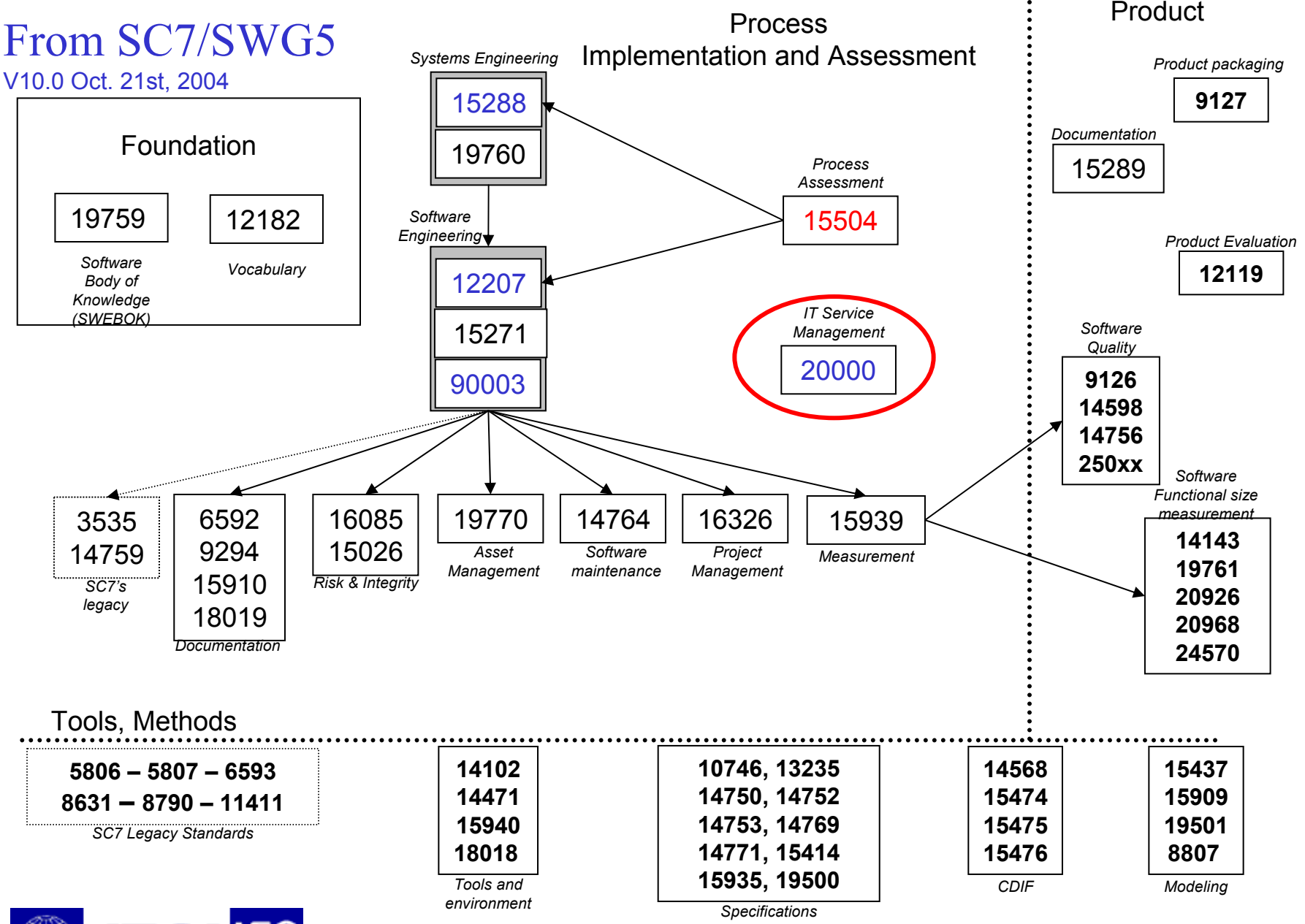


SC7 Structure



Adapted from Prof. M. Azuma

DRAFT
From SC7/SWG5
V10.0 Oct. 21st, 2004



Chairman's theme for Moscow

Chairman's theme for Moscow

CONSOLIDATION

(again)

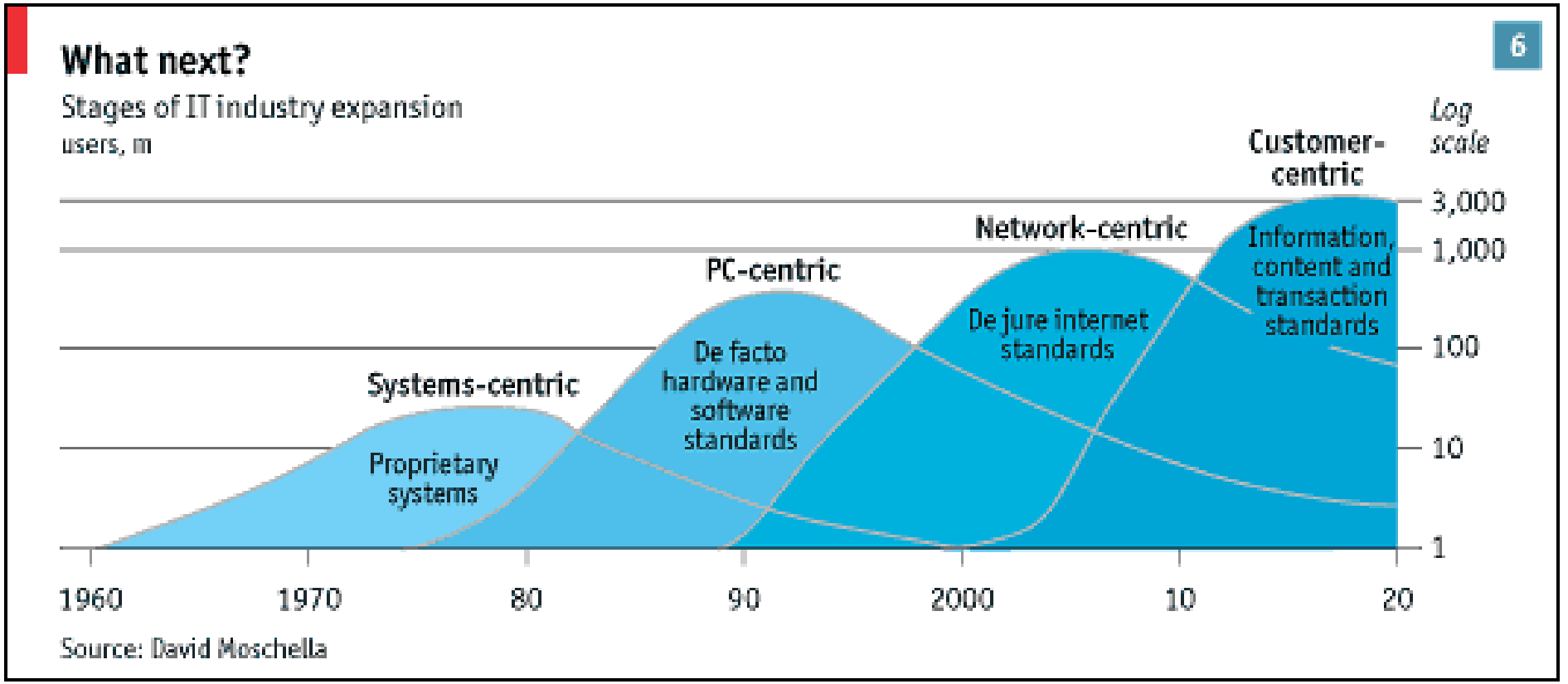
-> Taking stock, completing ongoing activities

& optimizing

Context

IT Evolution

(technology waves and social impacts)



From: *The fortune of the commons.* In *Coming of Age - A Survey of the IT Industry.* The Economist, May 8th 2003

Markets Size (10^9 US $)

ICT Vendor 2002

Reference: R.Fulton, COM-15-1667, Predicts 2002 – What's Ahead for the IT Industry, Gartner Research, Research Note, 2002-01-08 http://www.adabasnatural4ever.com/industry_news/media/predicts_2002_whats_ahead_for_the_it_industry.pdf

Telecommunications equipment	380
Computer Systems Hardware	240
Software Licenses	70
Project Oriented IT Services	250
Semiconductors	150
Support/Management IT Services	350
TOTAL	**1 440**

IT Evolution: Some Key Points

- General
  - Increased ubiquity of IT
- Market
  - Mostly a service market
  - Market that is getting more global
- Technology
  - A more interconnected world
  - A more M2M, transactional world
  - Content (multimedia) focus
  - A more 'intelligent' world

Why are standards important in IT?

One perspective – Global interoperability:

- Between machines/components
- Between people
- Between organizations

SC7 Contributions

-> Enable the creation of markets

-> Enable commercial activities

-> Enable functional products

-> Enable functional infrastructures

-> Enable the perinity of digital information

->…..

SC7 Markets

Includes:

Producer/Consumers/Operator/… of

- Embedded Software Systems
- Corporate/Enterprise Information Systems (IS) (*Management Information Systems (MIS); Data Processing*)
- Interactive Media Systems;

What is Enterprise IS?

Enterprise IS is a Systems of Systems:

Multiple, heterogeneous, distributed systems that are embedded in networks at multiple levels.

http://en.wikipedia.org/wiki/System_of_systems

...and have been developed independently through time

Embedded vs Enterprise

(Traditional) Embedded

- Control the 'real' world
- Hard or soft real time
- May impact Heath and Safety
- Independent or interrelated systems
- May be mass manufactured
- Enter maintenance once delivered. Many types of updates possible.

Enterprise

- Process information
- Soft real time
- Financial/Economic impacts. May impact Health and Safety in some cases
- Set of distributed heterogynous systems integrated into an organization.
- Include processes, business rules, data/information
- Continuous addition, modifications or retirements of components/subsystems/systems. Configuration changes.

Interactive Media Systems

Graphic/media intensive applications that have a interactive human interface:

- Simulators
- Immersive environments
- Computer Games
- Data Navigation Systems

Directions

Outputs from the 2004 Brisbane Plenary

Opportunities	OUTPUTS -> status
• Systems Engineering	• NWI and Fast Track
• Software and Systems Assurance	• Study Group –> Future project
• Systems Architecting	• Study Group -> WG42
• IT Operations and Services	• ISO/IEC 20 000 -> WG25
• Re-use	• Study Group -> No action
• Agile Processes	• No action
• Open Source Software (OSS)	• Study Group -> No action
• Curricula and Certification	• Study Group -> Project
• Application Domains Acceptance	
• Data ?	• NWI -> Project

Key Strategic Directions

- Respond to the evolution of the global IT market and of IT technologies
  - Increase globalization of IT Services
  - Growing importance of IT operations services
  - Growing importance of Systems Integration
  - Continual increase in IT ubiquity
  - Continual increase in the importance of the global IT infrastructure to the global economy

Key Strategic Directions (2)

- Continue:
  - Increase integration and harmonization of SC7 standards
  - Increase coverage of Systems Engineering
  - Increase harmonization of Software and Systems Engineering Standards
  - Integration of SC7 standards with IEEE's
  - Work closely with strategic partners:
    - IEEE, INCOSE, OMG, ITU-T, itSMF.

Key Strategic Directions (3)

- Increase the relevancy of SC7 standards for the three principals type of software systems:
  - Embedded Systems
  - Enterprise Information Systems
  - Interactive Medias

Terms of References

SC7 Terms of References

Standardization of processes, supporting tools and supporting technologies for the engineering of software products and systems.

Note: The processes, tools and technologies are within the scope of JTC1 terms of references and exclude specific tools and technologies that have been assigned by JTC1 to other of its SC's."

Need to Retouch SC7 Terms of References

- To correct some legacy wordings
- To better reflect the total life-cycle coverage of SC7 standardization activities

Proposed new terms of reference

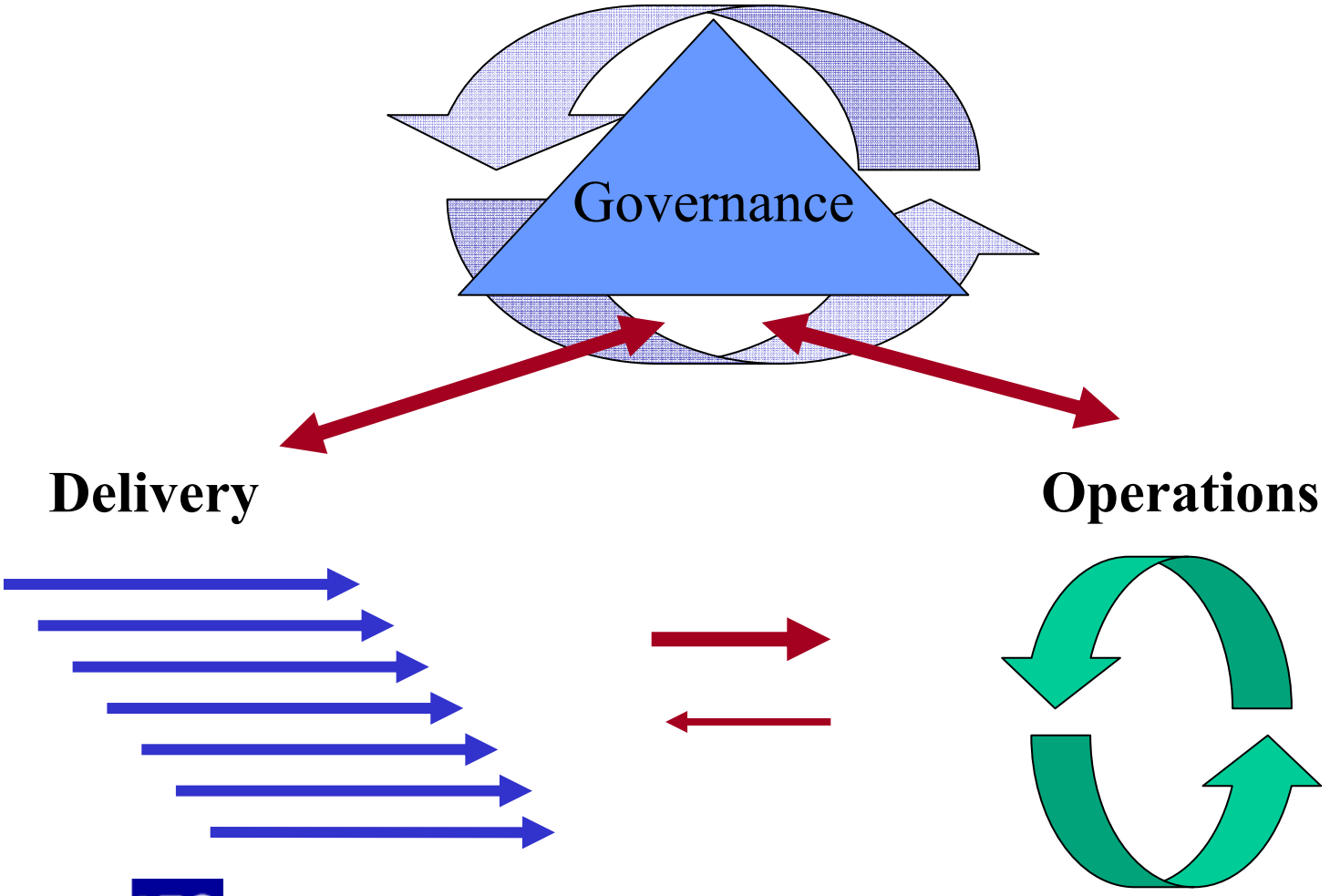
Standardization of processes, methods and supporting technologies for the engineering and management of software and systems throughout their life cycles.

Note: The processes and technologies are within the scope of JTC1 terms of reference and exclude specific technologies that have been assigned by JTC1 to other of its SCs."

IT Service Level

- Set of measurements characterising how an IT service is perceived by the user
- The user can be a human being or an organisation

Enterprise IT Processes



A Total Life-cycle Approach is Required to Ensure Appropriate Service Levels

IT Service Level

=

IT Governance & Management

+

IT Engineering

+

IT Operation

Examples of SC7 Work Pertinent to IT Service Management

- Software And Systems Life-cycle Standards (also have governance components)
- Software Maintenance
- Software Asset Management
- Software And Systems Risk Management
- Software Systems Assurance
- Software And Systems Products Related Standards

Recommendation: SC7 to reaffirm proposed new terms of reference

Standardization of processes, methods and supporting technologies for the engineering and management of software and systems throughout their life cycles.

Note: The processes and technologies are within the scope of JTC1 terms of reference and exclude specific technologies that have been assigned by JTC1 to other of its SCs."

Exploratory Work in Progress

Actives SC7 Study Groups

- Study Group on ITC Governance
- Study Group on Software and Systems Benchmarking and Measurement
- Study Group on Software Product Quality Evaluation Module
- Study Group on Review of TR 14143-5 – Functional Size Measurement

Intelligent Systems

- Banff Tech Watch Recommendations for JTC 1:
  - SC7 to assess if standardizations activities are required.
  - SC7 to assess IEEE activities in this area.
- Action taken:
  - Added to SWG5 workload
  - Discussions initiated
  - Study Group to be set up at next plenary

Action items for the plenary

Action items for the plenary

ITEM	ACTIONNEE(S)
Prepare resolutions on WG convenerships	Secretariat Drafting Committee
Refresh liaison officers appointments	Secretariat Drafting Committee
Repeat resolution on P Members participation to ballots: reminding P Members of their obligation to vote (Resolution 939)	Secretariat Drafting Committee

Action items for the plenary

ITEM	ACTIONNEE(S)
Identify active C liaisons **Take appropriate action on inactive C liaisons**	Secretariat WGs
Closure of WG12 (Resolution 928): transfer remaining projects and maintenance responsibility	BPG Secretariat
SW Testing NWI (Resolution 919): if accepted, to whom will it be assigned?	BPG

Action items for the plenary

ITEM	ACTIONNEE(S)
WG42 Presentation: No action required	
JWG TC54 Presentation: No action required	
WG 23 Presentation: No action required	
ISO Risk Management Project: need to reaffirm Resolution 888?	BPG Liaison Officer

Action items for the plenary

ITEM	ACTIONNEE(S)
Respond to JTC 1/SC27 WG1: would like to collaborate on IT Service Management (N3713)	BPG Liaison Officer
Respond to JTC 1/SC27: Collaborative work on Application Security (N3714)	BPG Liaison Officer
JTC 1/SC27 FCD Risk Management (N3715): should recognize that ISO/IEC 16085 exist	Liaison Officer Drafting Committee

Action items for the plenary

ITEM	ACTIONNEE(S)
Respond to the invitation to appoint a liaison to a new ISO/IEC joint project on Medical device software - Guidance on the application of ISO 14971 to medical device software (N3720)	Liaison Officer Drafting Committee
Respond the the ITU-T SG17 statement of interest in the NWI on Software Testing (N3718)	Liaison Officer Drafting Committee

Action items for the plenary

ITEM	ACTIONNEE(S)
Assess the request for a A liaison by the Information Systems Audit and Control Association (ISACA) and the IT Governance Institute (N3712)	BPG WG25 SG IT Gov WG21
Assess the proposal for IBSMA to become Type A liaison to ISO/IEC/JTC1 SC7 (N3719)	BPG WG25 WG21

Action items for the plenary

ITEM	ACTIONNEE(S)
Proposed modifications to the SC7 Terms of Reference to be presented to the full plenary and finalized during the week	Chairman & BPG to consult and come with recommendation to AG.
SC7 Chairman Term	NBs

Action items for the plenary

ITEM	ACTIONNEE(S)
Extension of the term of the Study Group on ITC Governance	Drafting Committee
Study Group on Benchmarking	Presentations postponed to second AG meeting

Action items for the plenary

ITEM	ACTIONNEE(S)
Endorse the recommendations of the Study Group on Review of TR 14143-5 – Functional Size Measurement	BPG
Endorse the recommendations of the Study Group on Software Product Quality Evaluation Module	WG6 Drafting Committee
Update the SC7 standard Framework to include ISO/IEC 20 000	SWG5

Action items for the plenary

ITEM	ACTIONNEE(S)
Implement the items SWG5 Report	SWG5
IEEE-CS Liaison Report (N3722)	BPG, WGs
Intelligent Systems	SWG5
IEC TC56	Drafting Committee Liaison

Action items for the plenary

ITEM	ACTIONNEE(S)
Futures Plenary: **2008: Berlin**	Chairman Drafting Committee
Futures Plenary: **2009 : India** **2010: Japan**	Chairman NBs
Future Interim Meetings: **2007: Montréal**	Drafting Committee

Action items for the plenary

ITEM	ACTIONNEE(S)
Future Interim Meetings: 2008, 2009	WG7 & 10 Conveners Chairman NBs