Scope Manager Impact on ICT Acquisitions

HOW TO SAVE PUBLIC AND PRIVATE MONEY? Experiences from Finland, Australia and elsewhere

AEMES, Madrid, 2011-02-22

Estimation
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Process improvement

Pekka Forselius
www.4sumpartners.com

Implementation of new IT system and threath of liquidity crisis forced a retail chain to reorganisation (TIVI 2009-08-11, Finland)

- Rapidly growing retail chain J. Kärkkäinen was forced to reorganisation due to IT implementation and overcaution of banks.
- J. Kärkkäinen took a giant leap building a 32 000 m^2 department store in Lahti, Finland, early this year. Now they have to hit the brakes. Kärkkäinen's plans were ambitious no longer than a year ago. Then he talked about a chain of 10 stores in an interview of a Finnish newspaper.
- If banks would act like they used to do a couple of years ago (which means: normally), financing would have been ok, and there wouldn't be any monetary crisis.
- CEO **Juha Kärkkäinen** says that implementation of a new IT system was the most severe cause of "growth pain". "It was supposed to cost 500 000 euros. Final price was 4,5 million, and its implementation erased three years profit."
- Training and roll-out of the new IT system took a lot of personnel's working hours and real business was struggling. Finally the system works now, and conditions for continuing development of the chain re-exist. Mr. Kärkkäinen does not reveal the IT supplier's name.
- At least the company Solteq, which supplies IT and ERPsystems for retail and trade, refers to an important IT system upgrade for J. Kärkkäinen in its semi-annual report.

Gigantic IT development program exploded into hands – public IT acquisition must be renewed, insists NAO (TIVI 2009-05-26, Finland)

- National Audit Office of Finland (NAO) defames the management and co-ordination of a large IT program of **the Finnish Vehicle Administration (**AKE').
- Palko-program for renewal of AKE's services started in 1999. It was supposed to be completed by the end of 2003, but according to the current estimate the new system will be finalized by the end of 2011.

- NAO blaims that cost estimating of the program was unprofessional and inaccurate. NAO's leading Performance Auditor **Hannu Stordell** tells to journal (TIVI) that the early cost estimate of 15 million euros has expanded to 49 million by the end of year 2008.
- "This price includes only the development and installation of new sub-systems. All hardware acquisition and maintenance service costs are still additional. "

“News” from Australia

Customs busted in $100m overrun

australianIT.com.au 9/12/2003

Blood IT system fails all its tests

Ron Hicks
• Blood management

THE IT system being used as the backbone for Australia's first national blood management system has so far failed all its evaluation tests.

The latest failure by the Progea blood management system, made by French-registered company MAK SYSTEM, means the scheduled introduction of the system into NSW and the ACT in January has been delayed "indefinitely".

It is the latest in a series of problems for the system, which is now four years behind schedule and its budget has blown out from $4 million to $38.9 million.

programmers are based. Earlier this year, a concerned federal Department of Health and Ageing commissioned Oceania Health Consulting, in collaboration with Deakin Management Consulting, to independently review the system.

That report lashed both Progesa and the ARCBS management of it. Of particular concern were the use of a dated flat-file database and MAK's "black box" approach to protecting its code in such a vital area, and its "superuser accounts", which give it wide access to the ARCBS systems.

The Oceania report found the delays in introducing the national bloodbank system were "largely due to short-

Analyst blasts ‘abysmal’ project costing skills

Kelly Mills
• Pricing

AUSTRALIAN IT professionals are "abysmal" at predicting the cost of IT projects, according to analyst the Meta Group.

Speaking at the research company's annual conference, META morphosis 2003, vice-president and international data services and publications product manager Carole Macpherson said project cost estimation was treated as an "art".

"IT professionals rely on expert opinion. As they often don't have time to price up all the pieces required, they rely on past experience and gut instinct," she says.

Macpherson says many IT professionals overestimate project costs as they are usually done "up-front and done once".

"IT tends to overestimate to pad for things that come up during a project," she says.

It is well known that a large percentage of IT projects come in over budget and miss deadlines. This inability to meet deadlines has tainted the IT industry.

Meta Group president Fred Amoroso says users are partly to blame for hi-tech's inability to correctly cost projects.

"Maybe users don't really know what they want," he says.

Nevertheless, Macpherson says, less than 10 per cent of companies that seek advice from the Meta Group are able to fully describe the project the company is about to undertake.

Additionally, Amorosso says, IT departments are on shaky ground at the moment, as IT is increasingly viewed as a cost centre in many organisations.

"The notion of driving value out of IT cannot exist, as IT is a supplier to the business. IT has to sit at the executive table to become more proactive about what is being deployed," he says.

As in other countries, Australian companies are under pressure because IT spending is declining year-on-year, Amoroso says.

"Increasingly, IT spending is just to keep the lights on," he says.

Issues foremost on IT depart-

'IT tends to overestimate to pad for things that come up during a project'
Carole Macpherson
Meta Group vice-president

ments' minds include outsourcing management, security, re-engineering organisations to be customer-centric, and infrastructure strategy — how to be more agile with less budget, says Meta Group Asia-Pacific managing director Paul Ventura.

Discussion at the roundtable also focused on a growing trend for IT departments to outsource all business processes.

Ventura says, from discussions with clients, organisations are increasingly outsourcing security and risk management.

"A small but growing percentage of businesses are outsourcing everything, including security audit functions," he says.

Meta Group product management senior vice-president Dave Cearley questioned this move by enterprises. "If they can't get patch management right, what chance have they got? They need to get their own house in order first," he says.

26 THE AUSTRALIAN — Tue:

PeopleSoft in trouble at RMIT

Simon Hayes
• Business

MELBOURNE'S RMIT University is reassessing its business software needs and reviewing the troubled PeopleSoft-based Academic Manage-

‘Nobody expects software projects to be delivered on time’

Richard White
Eagle Datamation chief executive

The Australian Financial Review
www.afr.com • Tuesday 27 July 2004

INFORMATION 33

Crane’s mettle tested by software glitch

Ben Woodhead

Metals manufacturer Crane Group intends to pare back technology spending from 2005 following a long-running tussle with a troubled software project that blew a $28.7 million hole in its 2004 financial result.

The cost-cutting drive, outlined in Crane's 2004 full-year results yesterday, comes after a tripling of its computer and communications costs over three years from $14.6 million in fiscal 2003 to $45.8 million in the 2005 financial year.

The surge in spending was caused primarily by a long struggle at the company to get a major PeopleSoft software project back under control after it ran amok, driving up costs and hobbling the performance of several Crane Group business units.

While the project was finally completed on July 19, it is expected to continue to weigh down the company's performance in fiscal 2005.

Crane had $48 million in deferred information technology expenditure on its books at June 30.

"Crane Group expects to deliver an improved profit result for the 2004 financial year due mainly to profit-improvement initiatives incorporated in the group-wide restructuring program," Crane managing director Greg Sedgwick said.

"These positive factors will be offset somewhat by a $14 million increase in IT costs, which will plateau in 2005 and which reflect the full implementation of the IT system."

Crane said in late June it may take legal action against PeopleSoft over the botched project, which uses technology from business software vendor JD Edwards. This company was acquired by PeopleSoft last year in a $US1.7 billion ($2.4 billion) stock deal.

Peoplesoft has previously said that it has a close working relationship with Crane, but declined to comment on the potential claim when the matter was first raised in June.

Crane was forced to make a $28.7 million pretax writedown on the software in the 2004 financial year, the lion's share of $51 million worth of significant items for the 12 months to June 30 this year.

The impact of the troubled software project can be seen throughout Crane's information and communications technology expenditure since fiscal 2003, when it spent just $5 million on group infrastructure and telecommunications.

That figure jumped to $13.2 million in 2004 and the company will spend $22.5 million on infrastructure and telecommunications in the 2005 financial year.

System and user support costs, meanwhile, rose from $7.1 million in 2003 to $8.4 million in 2004 and to an expected $10.4 million in 2005.

Information and communication technology depreciation and amortisation costs also took a big jump, surging from $2.5 million in 2003 to $10 million in 2004. Only a small increase to $12.8 million is expected in fiscal 2005.

Crane had already disclosed some of the steps it will take to cut costs and about 30 information technology jobs are expected to be slashed. Cash has already been put aside for the redundancies under a $5.1 million management restructuring expense.

"With the implementation project now complete, the Crane Group can focus on using the system to improve business processes and working capital management," Mr Sedgwick said.

Telstra billing system delayed

Michael Sainsbury
Telecommunications

AFTER three years and more than $30 million, a Telstra project to deliver its customers a single bill for broadband DSL and voice services has been delayed until at least December.

The project was originally code named FAST but was changed last year to BAAB (Broadband Activation Billing).

Quizzed about the delay at Telstra's profit results last week, Telstra chief executive Ziggy Switkowski promised the bill would be available by December.

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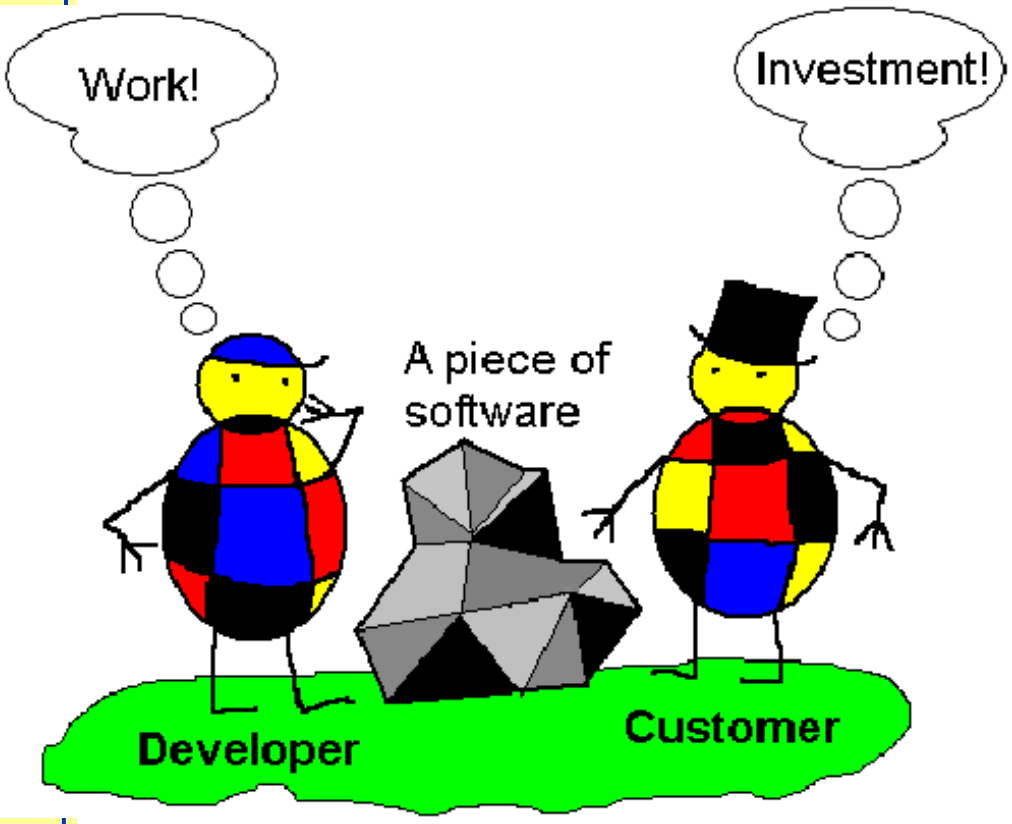
Typical features of the failed ICT programs?

- Business people know at least roughly how they want to improve their business.
- Technical skills of the developer team members are good enough to provide software.
- ICT program steering and project management skills could/should be better.
- Focus of the developer is heavily on working and getting paid. No questions about scope, progress, quality or risks.
- No post mortem analysis, no systematic and analytic learning, but lots of bad feelings.

Customer & supplier views for pricing



1. **Customers** don't very often understand the size of software, even if they are rather good at specifying requirements. **<u>They want fixed price!</u>**
2. Most of the **developers** are not any better to measure the size of software. They know that the user requirements will change. **<u>They want to be paid based on hours worked.</u>**

Carol Dekkers & Pekka Forselius,
4SUM Partners
www.4sumpartners.com

Typical ’first aid medicines’ for the ’2nd wave’

- Hire a trained and certified ICT project manager.
- Pay more attention to contracts and sanctions for late delivery, hire a lawyer.
- Require more frequent reporting.
- Organize steering committee meetings more often, with more people involved.
- Move to new, revolutionary technologies and methods, e.g. OO, SOA, Agile, Cloud, Scrum, etc.
- No post-mortem analysis, no systematic learning, no prove of real improvement.

Pekka Forselius
www.4sumpartners.com

Typical features of the ´2nd wave' ICT programs

- Better project planning and reporting, with more unproductive tasks included for all the stakeholders.
- Less ambitious business goals and targets.
- More professional but stressful atmosphere in early phases..
- Frustration and loss of best technical and business skills.
- Focus tightly on risks, and the PROMISED schedule and cost. No questions about the quality or scope.
- Less functionality with same money and time.
- No proved success – but less noise (minor failures and less public interest.

Pekka Forselius
www.4sumpartners.com

More efficient medication, a jump to 3rd wave:

- Hire a professional Scope Manager, who works in average 2 days/month for your program.
- Pay more attention to scope.
- Pay equal attention to time and cost.
- Pay some attention to quality.
- Use measurements! Apply northernSCOPE™or southernSCOPE concept throughout the development life-cycle.

Pekka Forselius
www.4sumpartners.com

Basic Elements of Unit Pricing in IS Development

1. Functional Size Measurement (i.e. Function Points, FP) from functional user requirements.
2. $$/FP based tendering and contracting.
3. External, independent Scope Manager.

Pekka Forselius
www.4sumpartners.com

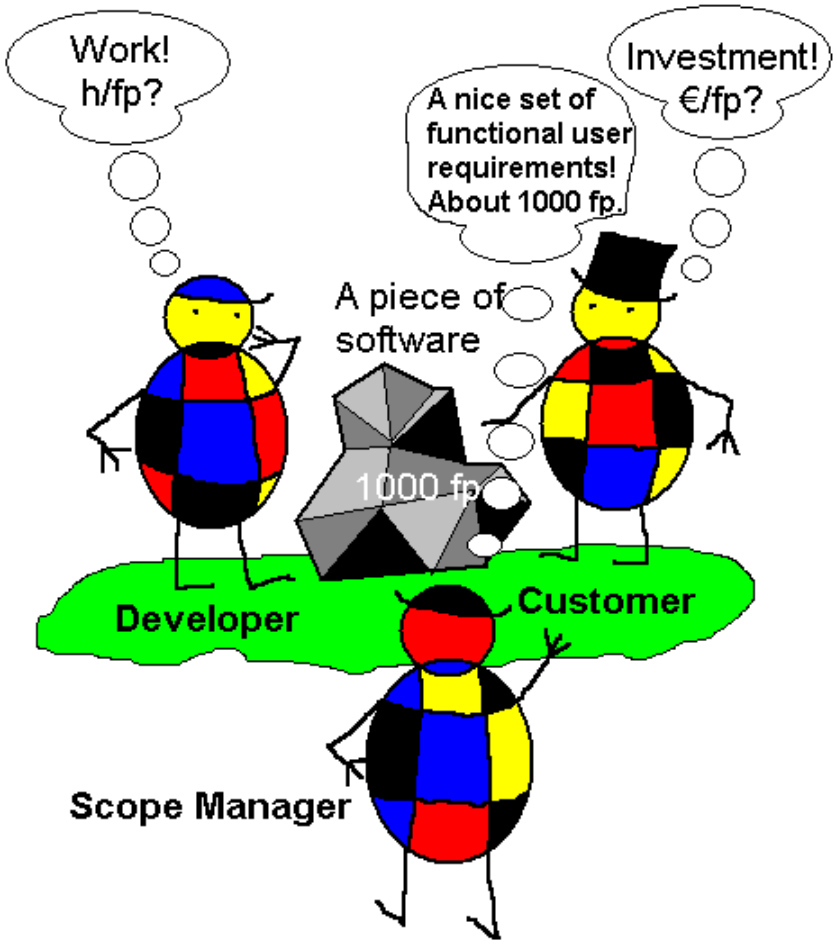
ISO/IEC 29881:2010 - FiSMA 1.1

- One of five ISO 14143-1 conformant FSM methods.
- **Measure the functional size of a piece of software** through different functional services provided by it:
  - Interactive navigation and query screens
  - Interactive input screens
  - Non-interactive output for the human users
  - Interface records to other pieces of software
  - Interface records from other pieces of software
  - Data storage services (entities)
  - Algorithmic and manipulation services specified by user
- Equally understandable and controllable for all parties.
- Very detailed information at FiSMA website.

Pekka Forselius
www.4sumpartners.com

Scope manager – the Equaliser

- A Scope Manager is neutral software measurement specialist with good understanding of requirements and development work.
- The customer organisation can hire a professional Scope Manager to help from early tendering phase to the end of the development life-cycle.
- **<u>The customer and developer can use unit pricing e.g. €/fp.</u>**



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Carol Dekkers & Pekka Forselius,
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Three key questions of a Scope Manager:

- **What should**, and is agreed to **be delivered?** In terms of the users, customers, and the developers.
- **What has been delivered** already?
- **What portion of the total delivery** does it represent? (how to measure progress)

Pekka Forselius
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Case MoJ Finland in summary

- Ministry of Justice Finland in brief: 10 000 employees, ICT budget 40 M€, IT development budget 8 M€.
- Several disasters and crisis in the past, in 1990's.
- Trial of Functional Size Measurement ("function points") in 2001-2004 within one of the programs in crisis.
- Decision to start applying FSM and FP based pricing in all important IT development programs and projects in 2005.
- Highlights of MoJ achievements in 2010, according to Senior Specialist Martti Karjalainen from the CIO office of Ministry …

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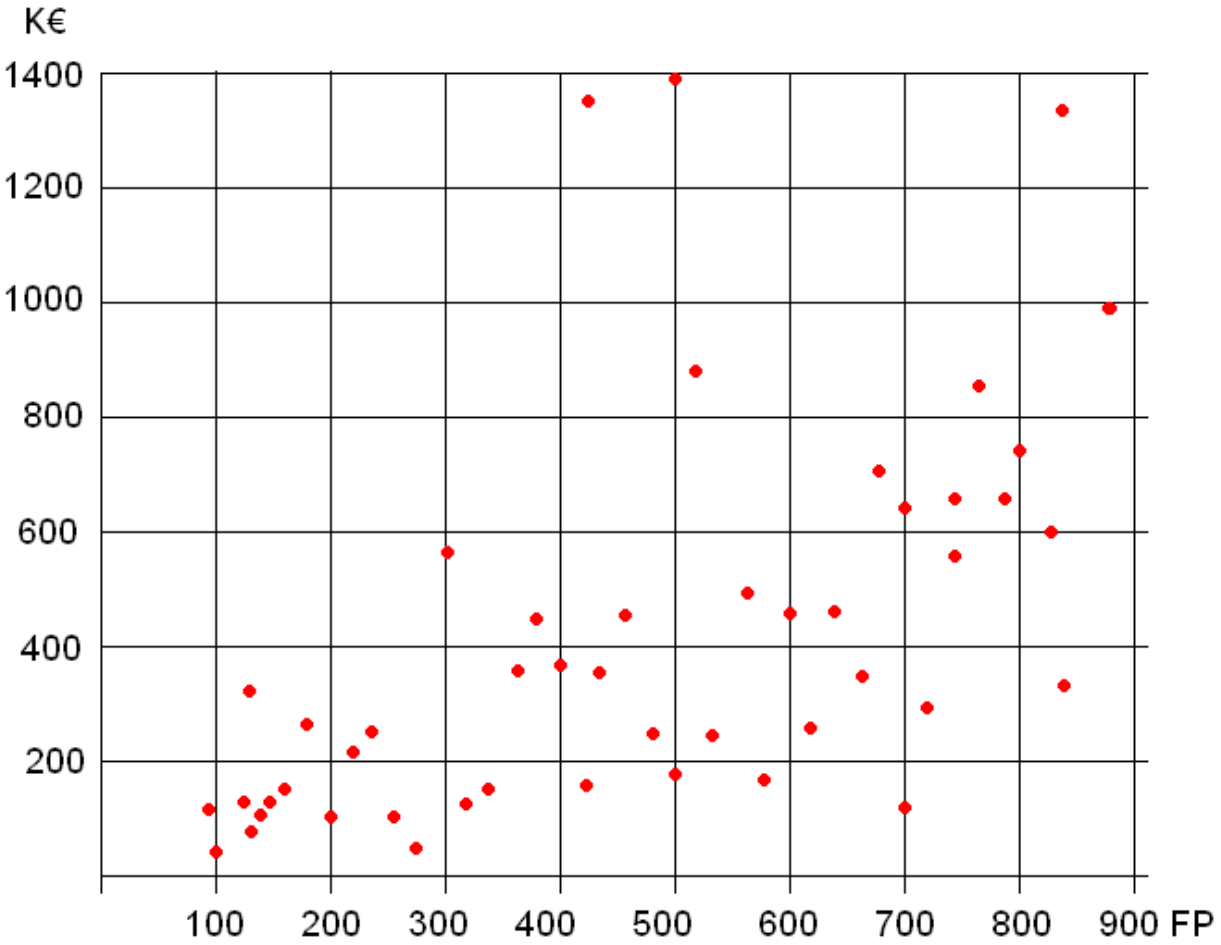
Highlights of MoJ achievements

- ”Today €/FP pricing is de facto standard in competitive bidding in all our IT development programs.”
- ”Average price has decreased from 500-1000 €/FP to level 300 €/FP.”
- ”Our suppliers have embraced positively the new pricing model. Focusing on functionality introduced a new, mutual language for us and our suppliers.”
- ”Learning from experiences has started and will be continued for continuous improvement.”
- 1 M€ annual savings in IT development!

Correlation between price (K€) and functional size (FP) - 1

- A remark: Variation of the price between projects of same software size can be rather large.

- Source: Experience® database, random sample



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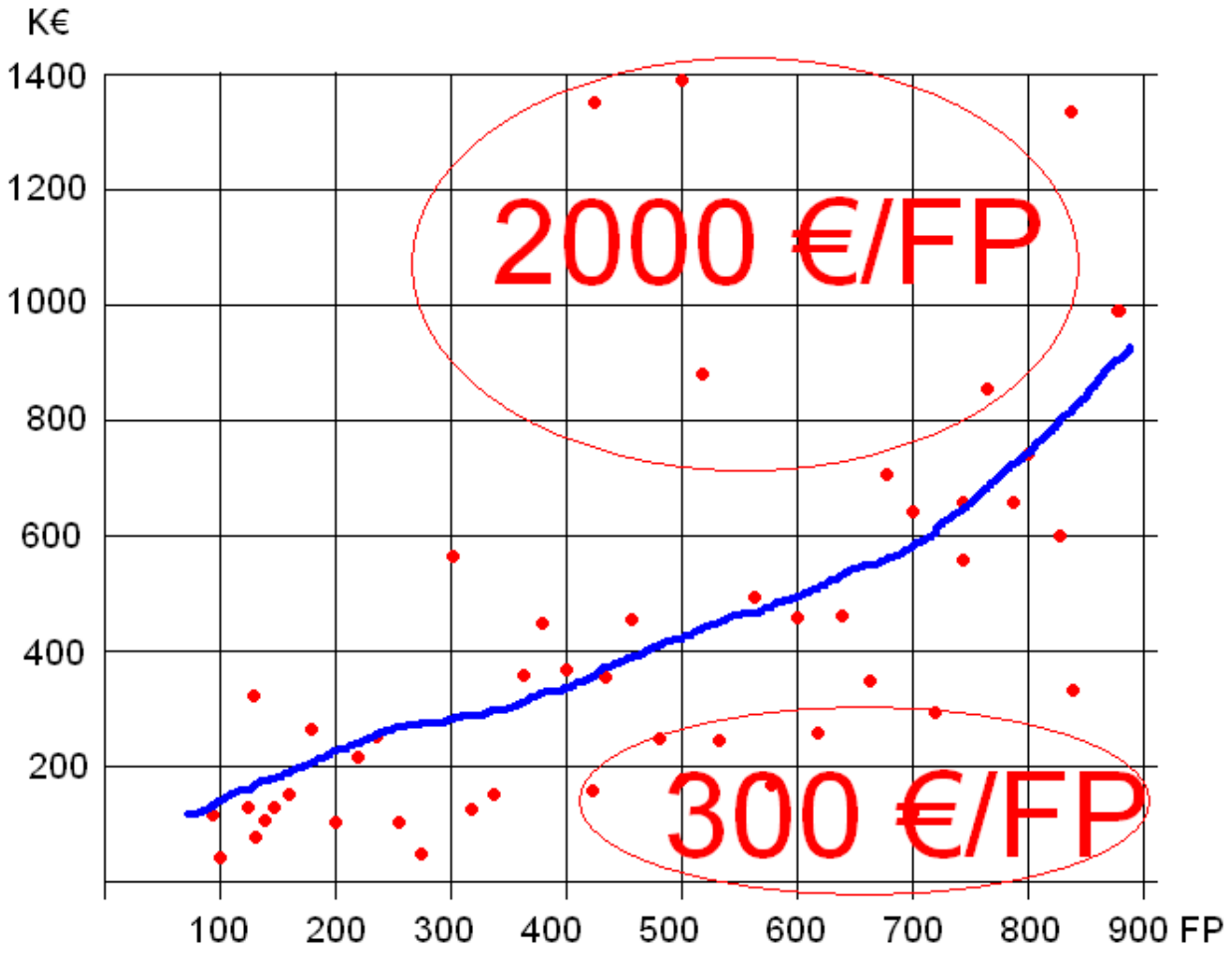
Correlation between price (K€) and functional size (FP) – 4

- Final remarks: Most of these projects didn't apply unit pricing, but they still represent the best part of ICT industry. The worst don't collect any data.



- Source: Experience® database, random sample.

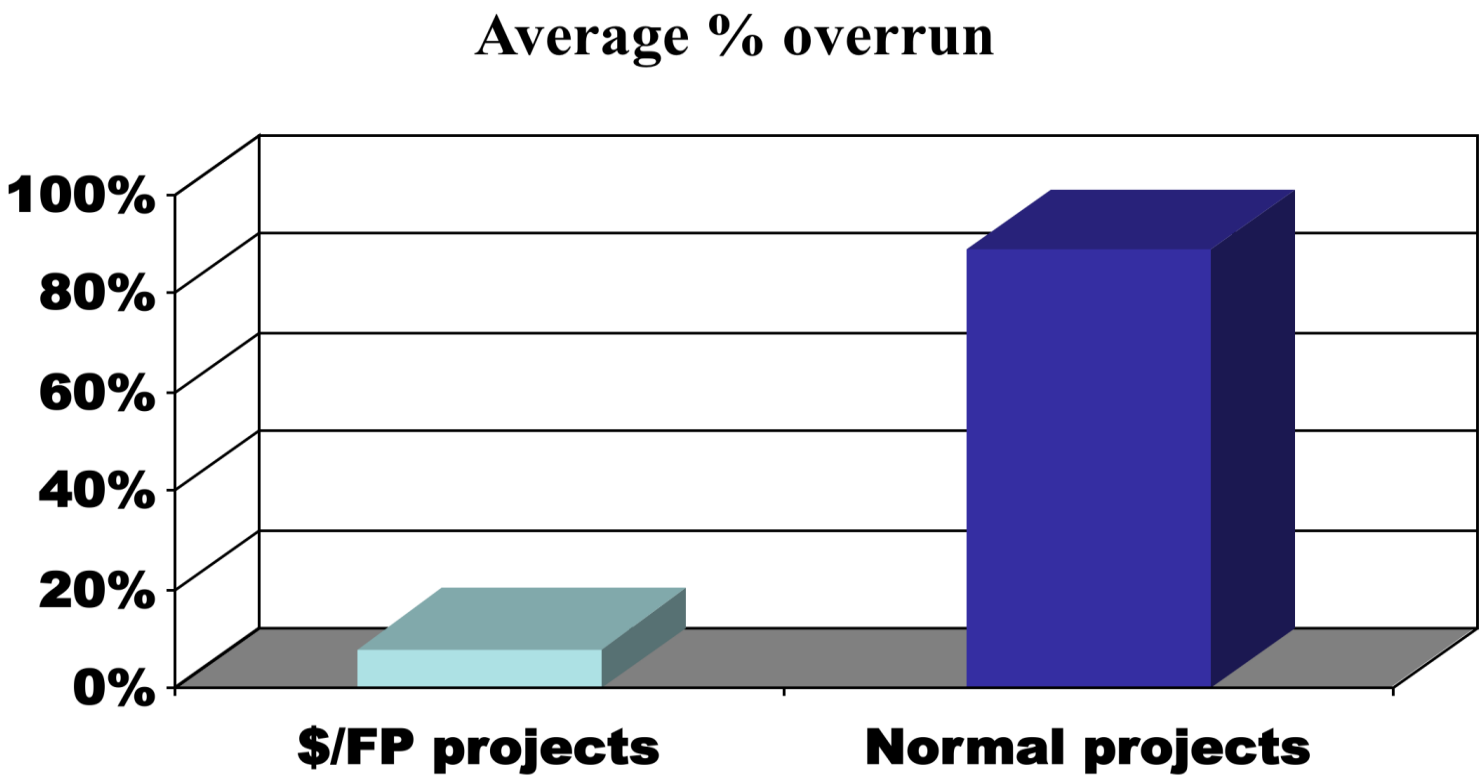
Case Victorian Government

- VIC in brief: A state of Australia, around Melbourne, 5M people; Government sector supposed to spend resources to IT development at same amount than any similar size of country, e.g. Finland.
- Several disasters and failures in the past, in early 1990's.
- Idea of using Function Points as the key measurement and basis of pricing model ($/FP) in 1996.
- Trials and encouragement progress during the late 1990's.
- Publication of southernSCOPE concept in 1999.
- Highlights of VIC Government according to Terry Wright, the CIO of the Government …

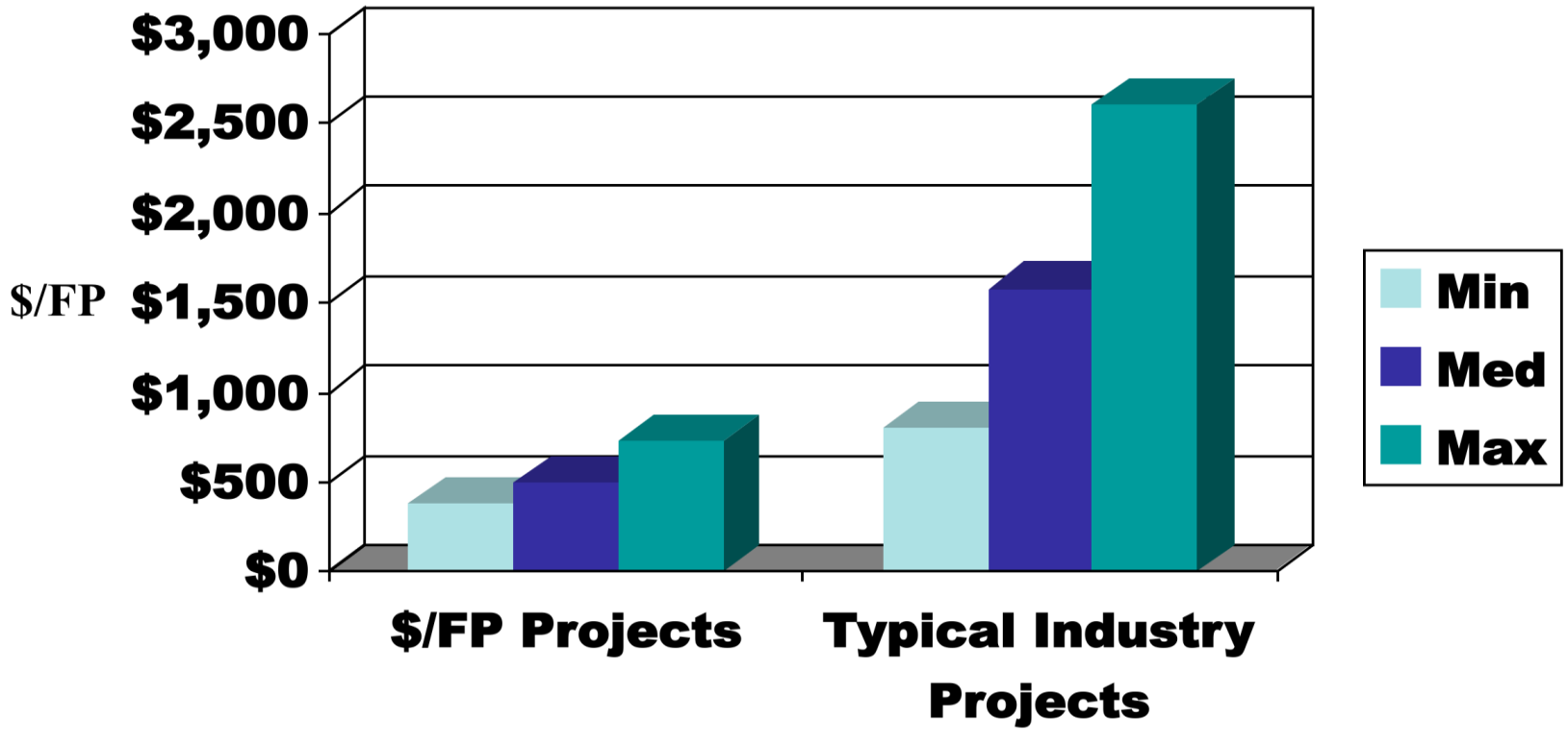
Highlights of VIC Government

- Regular, ”main stream” use of the $/FP pricing since 2000.
- Average price/FP decreased to 1/3 in 5 years.
- Less and much smaller schedule and budget overruns.
- More satisfied users of the new IT systems.
- Remarkable annual savings!

Unit price $/FP, experiences from the state of Victoria



Unit price $/FP, experiences from the state of Victoria



Case SOAP at MoJ Finland

- Feasibility study project finished in May 2008 resulting a nice set of specified requirements.
- Original Functional Size Measurement by a Certified Scope Manager in June 2008: Result 2100 FP.
- A developer company hired by 300 €/FP in September.
- Long silence (from the CSM point of view).
- An email from the customer project manager in May 2009: ”We are in trouble with SOAP. Our developer is agile, and now they say that the size has increased to 2800 FP. What can we do now?”
- Scope Manager helped them by recounting based on the current versions of usecases etc. Result: 2350 FP.
- ~~Savings 135 000 € (- 3 000 € for the CSM consulting price).~~

Where are the Certified Scope Managers?

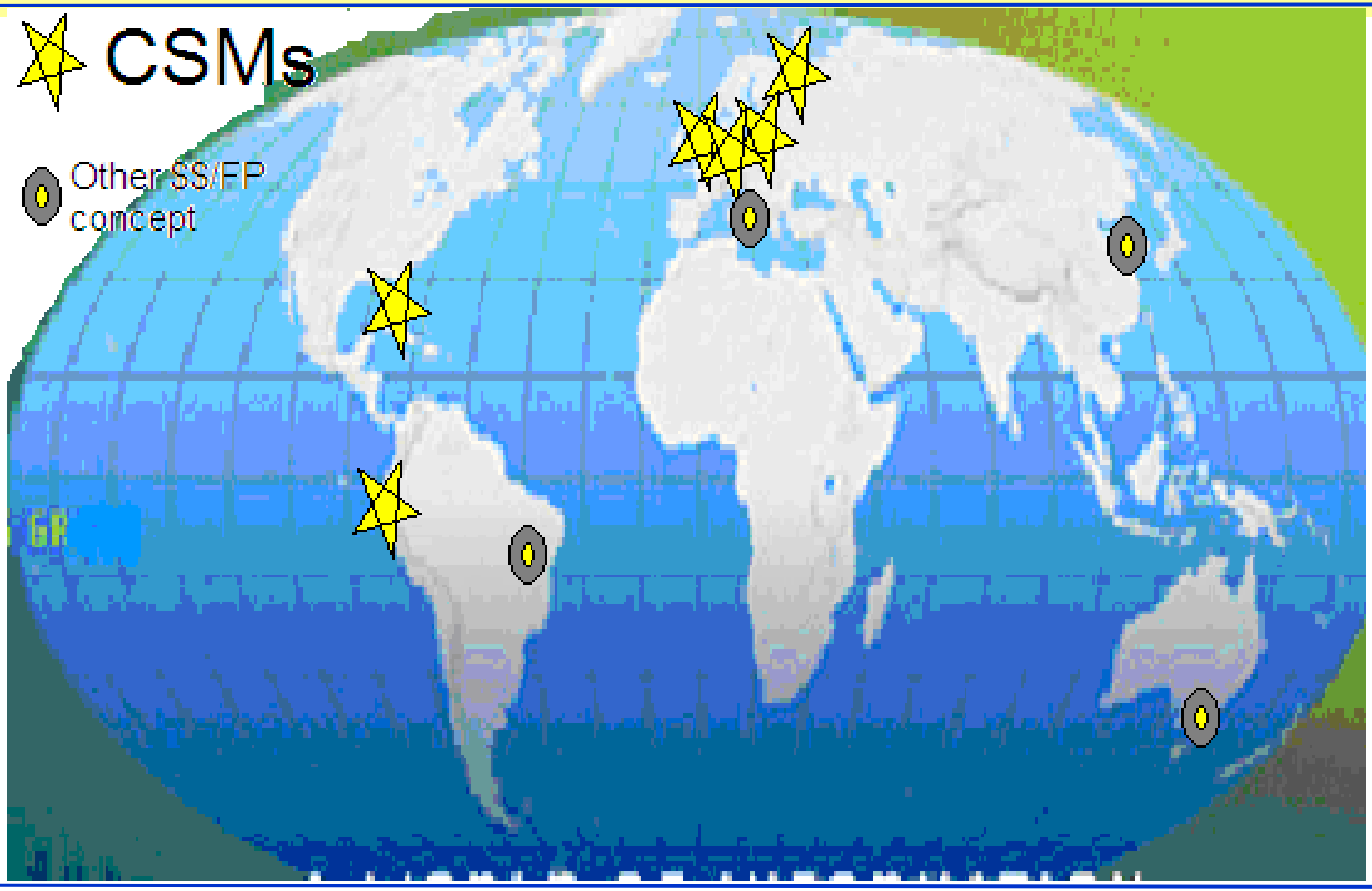
- 58 CSM's in Finland
- 5 CSM's in Germany
- 5 CSM's in The Netherlands
- 2 CSM's in Denmark
- 1 CSM in USA
- 2 in Peru
- Other similar jobs in Australia, Italy, South Korea, Brazil

NorthernSCOPE™ Certified Scope Managers – July 2008

COUNTRY	NAME OF CSM	DATE CERTIFIED
Finland	Pekka Forselius, 4SUM Partners Oy	2006/01
	Helena Biström, Aware Oy	2006/05
	Henri Grönblom, Endero Oy	2006/05
	Leena Klaavu, Enfide Ky	2006/05
	Matti Kokkola, Ixonos Teknologiakonsultointi Oy	2006/05
	Heikki Vesalainen, Ixonos Teknologiakonsultointi Oy	2006/05
	Hannu Lappalainen, Aware Oy	2006/12
	Heikki Salminen, Fujitsu Services Oy	2006/12
	Helena Salo, TE/Tkp-Tieto Oy	2006/12
	Mika Johansson, FiSMA Ry	2007/05
	Ari Kesäniemi, Ixonos Teknologiakonsultointi Oy	2007/05
	Jukka Piipari, SAS Institute Oy	2007/05
	Sari Valtola, Osuuspankkikeskus	2007/05
	Ilja Grujic, Profit Software Oy	2007/11
	Arto Saari, Ixonos Teknologiakonsultointi Oy	2007/11
	Anne Isotalo, SOK	2008/05
	The charter group of FiSMA Scope Managers who established the original CSM body of knowledge are members of the Finnish Software Measurement Association (FiSMA) includes:	
	Pekka Forselius, 4SUM Partners	2002/01
	Risto Nevalainen, Falcon Leader Oy	2002/01
	Tapani Ranta, Generum Oy	2002/05
	Hannu Toivonen, Nokia Siemens Networks	2002/05
	Juhani Jokela, Fujitsu Services Oy	2002/05
	Paula Männistö, TE/GRM	2002/05
	Erkki Savioja, TE/Fidenta Oy	2002/05
	Antti Huuskonen, TE/GRM	2002/05
	Sirkka-Liisa Malmivaara, TE/- retired -	2002/05
	Markku Niemi, Helsingin Yliopisto	2002/05
Germany	Manfred Seufert, Mediaan GmbH	2008/05
	Torsten Ecke, Mediaan GmbH	2008/05
Netherlands	Marcel Pereboom, Mediaan/abs b.v.	2008/05
	Werner Mourmans, Mediaan/abs b.v.	2008/05
USA	Carol Dekkers, Quality Plus Technologies, Inc	2007/11

Last updated 2008/05

Scope Managers worldwide in 2010



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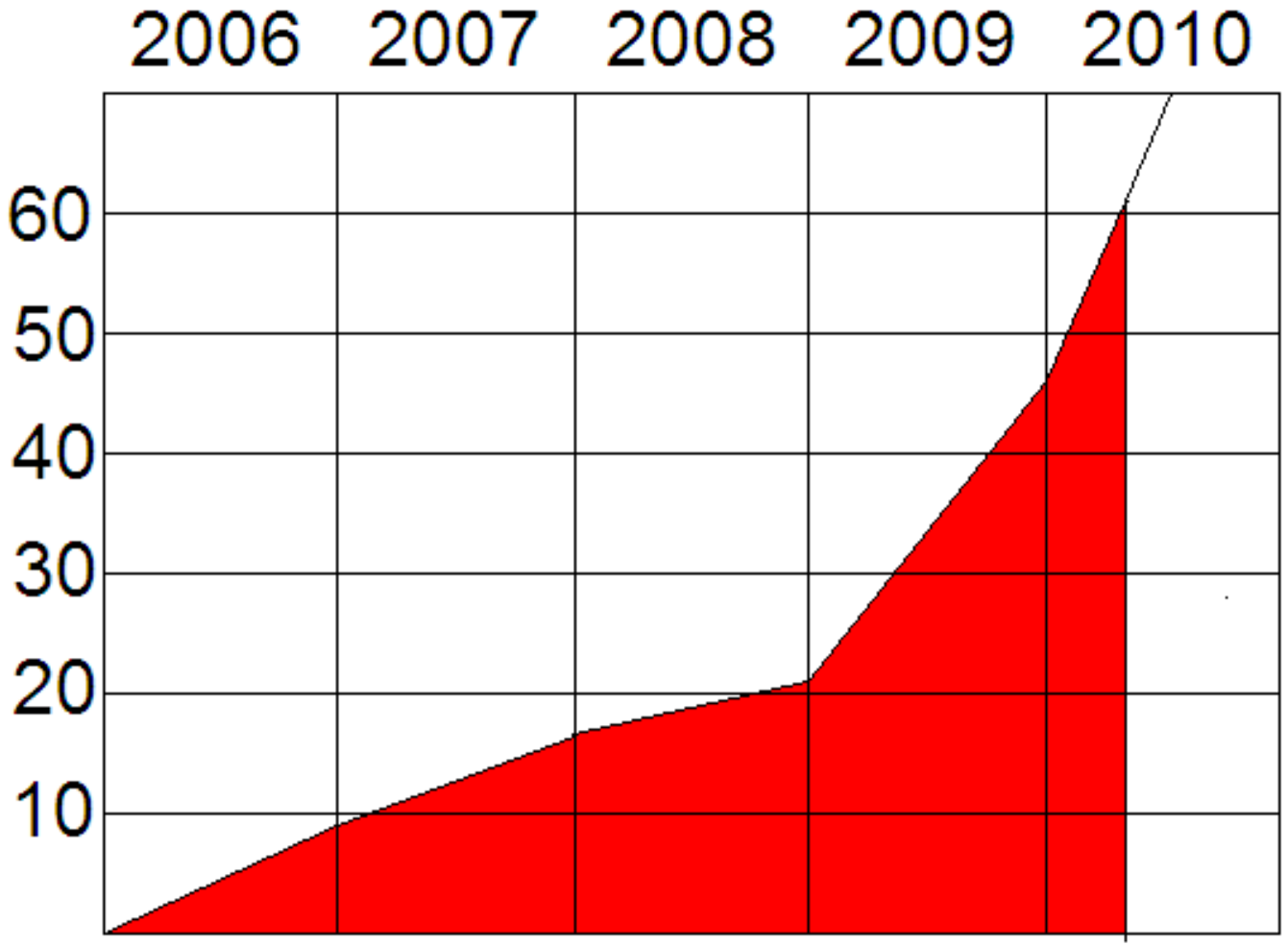
Number of northernSCOPE™ Certified Scope Managers 2006-2010



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Conclusions

- How about YOU?
- And your country?
- Would here be anything for you?
- Think about it!

Pekka Forselius
www.4sumpartners.com

Thank you!

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see also www.fisma.fi , www.ecqa.org and www.isbsg.org