

Panel Session: TSP in Mexico

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Kernel Technologies



Proceeding's Objective

Share **Kernel's** experience and lessons learned when introducing TSP on a national scale.

Discuss at the Panel Session.



Agenda

- **Challenges faces with large scale national roll out of TSP**
- **Where are the opportunities?**
- **What are the practical barriers?**

PSP Adoption: Bad News

In Mexico, since 83% of Companies are very small and small enterprises it is difficult to introduce TSP completely (100%).

- Some organizations just train their engineers on PSP and don't introduce a pilot project
- Some prefer only MoProSoft

Difficulty on SMEs to keep intact a team

- Lack of Staff and/or Staff turnover
- Availability issues when scheduling new courses

Having an Instructor or Coach

- Is expensive
- Depends on the Number and Size of Projects



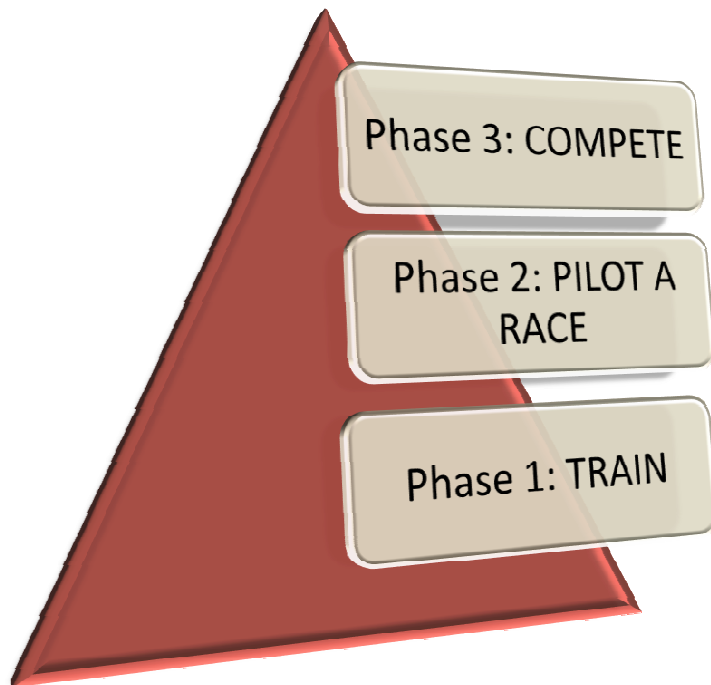
PSP Adoption: Good News

In Mexico:

- Academic sector has introduced PSP in their undergraduate students.
- SEI support has been excellent
 - Developing Testing Centers to Certify individuals
 - Understanding Mexico's needs.
- Government Support has been a key element to introduce massively.
- MoProSoft, has helped working together with PSP



Kernel's Strategy



Implement **PSP and TSP** to fully introduce processes and quality in organizations to increase their maturity and competitiveness.

1. Build TSP from its basis = **TRAINING**
 - Institutionalize their improvement
2. Provide Coaches and services to those organizations who can't invest on their own staff.
 - Sharing Coaches between organizations
 - Building a pay-off model by productivity
3. Fully implement Quality in the organization
 - CMMi ML3 or 4
 - MoProSoft ML 3 or 4



Challenges

- Reach TSP tactical and massive marketing
 - Communicate importance on TRAINING
- Flexibility with Very Small Companies to finish the course.
- How can engineers who don't speak fluent English pass the exam?
- How to motivate engineers to complete the course?

Opportunities

- T-learning environment
- Developing a Web Proctored Exam.
- Incentives for PSP Certified Engineers in Industry
- Having the courses in different Language
- Developing tools such as the PSP Grader or Dashboard to improves performance of instructor for reviewing
- More Strategic Partners to train more instructors and expand globally



What has worked?

1. Partnering with Universities to share instructors in reaching massive training.
2. Fitting PSP training schedule to organizations needs.
3. Creating Testing Centers to motivate engineers on training through PSP Certification
4. Using TSP as base model to adopt or reach a higher maturity level.
5. While in the course, implementing PSP practices such as: checklists, standards, scripts, proxy estimations in their companies Software Process Development



PSP Adoption: Best News

It is working!

Still we need help from more SEI partnered organizations to share and have a common goal to increase competitiveness and quality in IT organizations.

Today **368 out of 603** PSP Certified Engineers are Mexicans (64%)

Currently from all the PSP certified engineers in the World, Kernel has contributed with the **20%** of those.



Some other topics to discuss...

1. How to align contract commitment with teams commitment?
2. How to understand task-hours with development teams?
3. What if team members lack some self-management skills?
4. How to take in consideration Quality criteria with our customers?



Contact Information

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PSP Instructor and TSP Coach

Thanks!

www.kerneltechnologies.com



TSP Initiative in Medellin Colombia: Pursuing Quality and Competitiveness

September 21th, Pittsburgh

Lina Taborda
Intersoftware – Director

Yuri Ontibon
SEONTI

Mónica Villarreal
Intersoftware - Board Member
SQA S.A.

Miguel Serrano
SEONTI

¿WHY MEDELLIN?



Medellin is wagering to:



**... be a digital city,
global and
competitive...**

1. Establish a dynamic business ecosystem
2. Teamwork and partnering
3. State policies to promote an enabling environment and tax incentives
4. Facilitate mobility of researchers to industry
5. Creating competitive academic programs with educational institutions
6. Ensure the management and appropriation of knowledge
7. Promoting innovation, research and development
8. Enabling new business capabilities and services
9. Develop new national and international markets
10. Encourage high quality human resources to improve productivity and competitiveness

What motivates us?

- Active participation in the productive transformation of the country, so we can consolidate this as one of the three most competitive countries in Latin America for 2032. (in accordance with the vision of “National Policy of competitiveness and productivity”)
- For 2019, Colombia should be in the first three Latin American countries in international indicators of ICT (Information and Communication Technologies) use and appropriation.
- Leverage the growth and strengthening of the Colombian industry through a range of high added value towards vertically integrated technological competitiveness.
- Access new markets and strengthen nationally and internationally.
- Internationalize the value offer of the actors in the value chain of the ICT becoming a world class macro sector.
- A global digital environment, in a competitive space, with projection to national and international level.

How to start?

Intersoftware is a nonprofit corporation, created in 2004 by a group of software entrepreneurs and related services from this sector, in order to improve competitiveness of enterprises and the wider industry in a partnership model.

Currently brings together **23 companies**, representing **85%** of turnover and employment generation sector in Antioquia Province/State (Departamento), Colombia



Member companies Medellin Cluster Software



How to develop the partnership model?



Strategic Platform

INTERSOFTWARE MISSION

"We are the network" which facilitates and strengthens the conditions of associativity, innovation and entrepreneurship for "markets access that demand different solutions with high value added in information technology and communications"

INTERSOFTWARE VISION 2012

position the Intersoftware in
Colombia

INTERSOFTWARE VISION 2015

most dynamic ICT market in Latin
America with Global Operation

INTERSOFTWARE VISION 2019

Being recognized as a leading ICT
networks in the Global market

OBJECTIVES

Provide benefits to members of the Network and the country through the generation of competitive

To achieve the development and
recognition of the country as
world class sector.

Promote the development and
growth of members of the value
chain of ICT

Develop a self-sustaining ecosystem,
dynamic and synergistic for members of
the value chain of ICT



Associative Values



SYNERGETIC ASSOCIATIVITY

Strengthening competition and cooperation between Network members through the synergy created through our partnership model, generating benefits to all parties



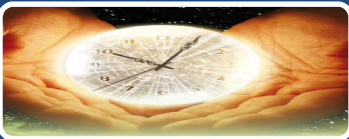
INNOVATION AND CREATIVITY

Promote the creation of new capabilities and innovative and creative solutions for development of our members competitiveness



LEADERSHIP

We are leaders in leading our members achieve their business vision through income and new market development



KNOWLEDGE

knowledge capitalization as the main asset that allows our members to reach their full potential.



ACCOUNTABILITY AND TRANSPARENCY

We maintain a harmonious and just act with integrity and consistency of our actions to the members, customers and society.



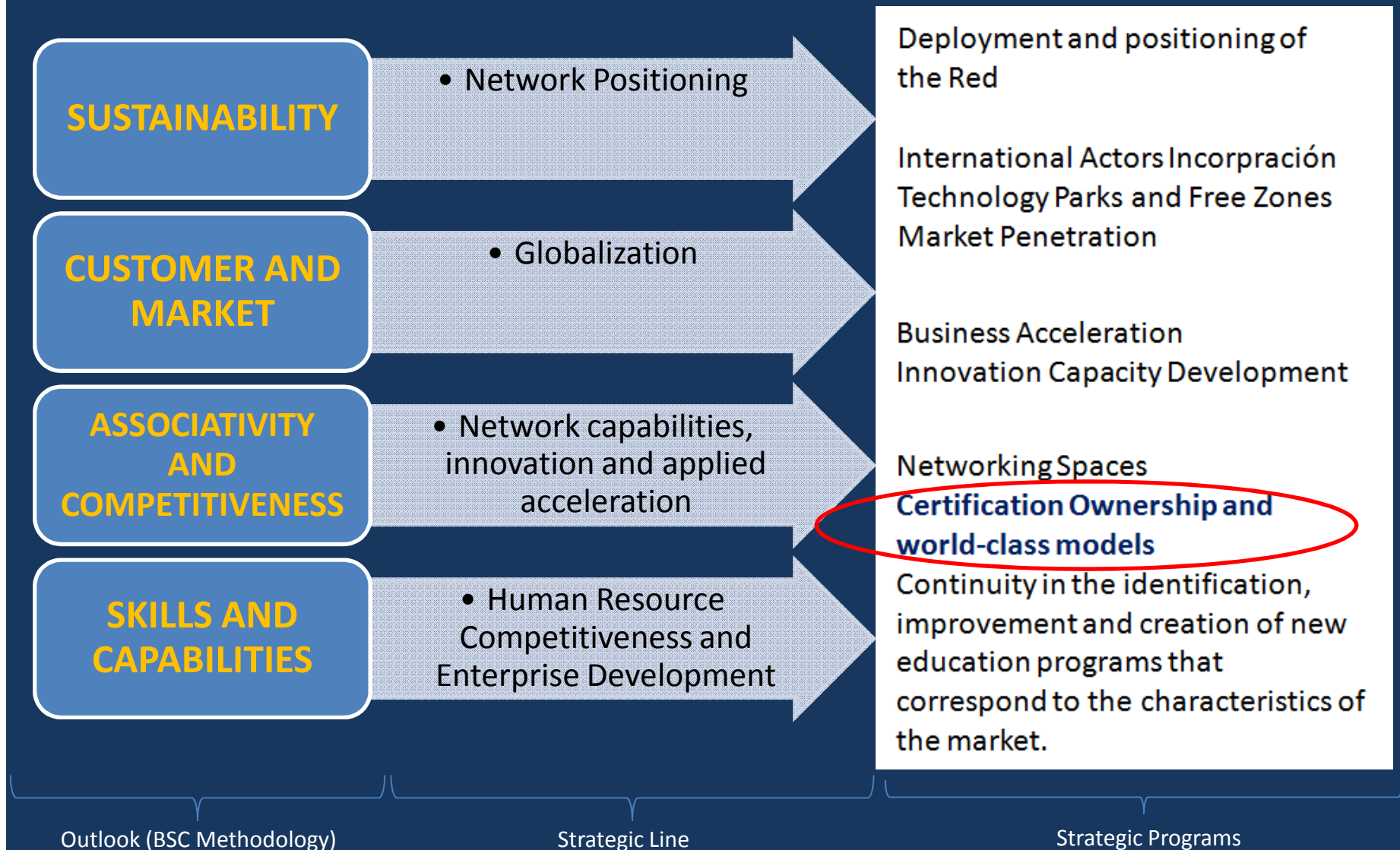
AMBITIOUS PASSION

We are strongly willing to achieve the vision of the Network and contribute to the development of our economy

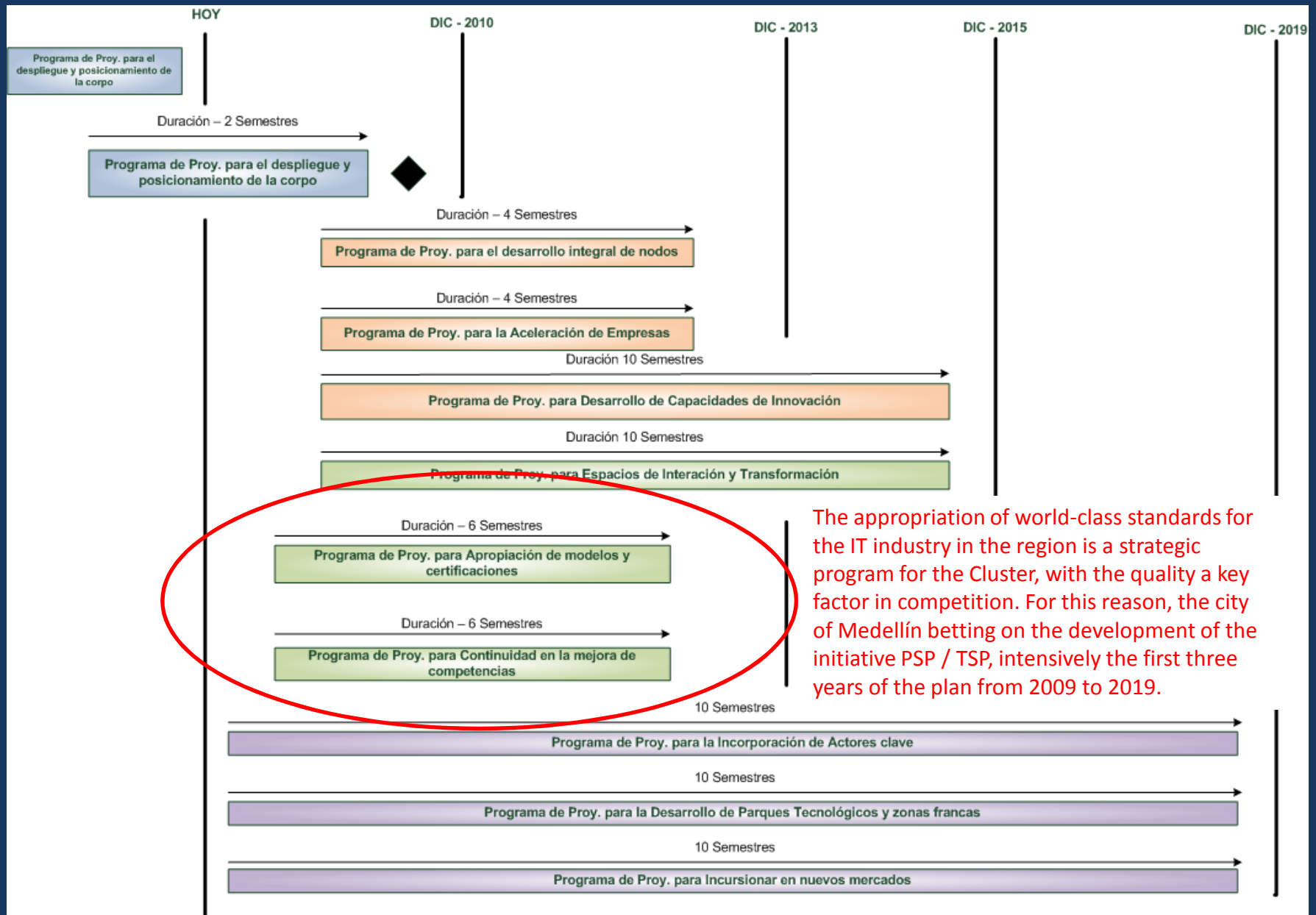
Strategic Deployment



Strategic Deployment



Roadmap Strategic Programs



The appropriation of world-class standards for the IT industry in the region is a strategic program for the Cluster, with the quality a key factor in competition. For this reason, the city of Medellín betting on the development of the initiative PSP / TSP, intensively the first three years of the plan from 2009 to 2019.

Initiative PSP / TSP

Medellin - Colombia

Una iniciativa:

intersoftware
Cluster del Software
Colombia

Con el apoyo:



rutaⁿ
MEDELLÍN
CENTRO DE INNOVACIÓN Y NEGOCIOS



Alcaldía de Medellín



CITY and country initiative!



Una iniciativa:
intersoftware
Cluster del Software
Colombia

Con el apoyo:
SEONTI

rutaⁿ
MEDELLÍN
CENTRO DE INNOVACIÓN Y NEGOCIOS

MEDELLÍN
OBRA
con amor

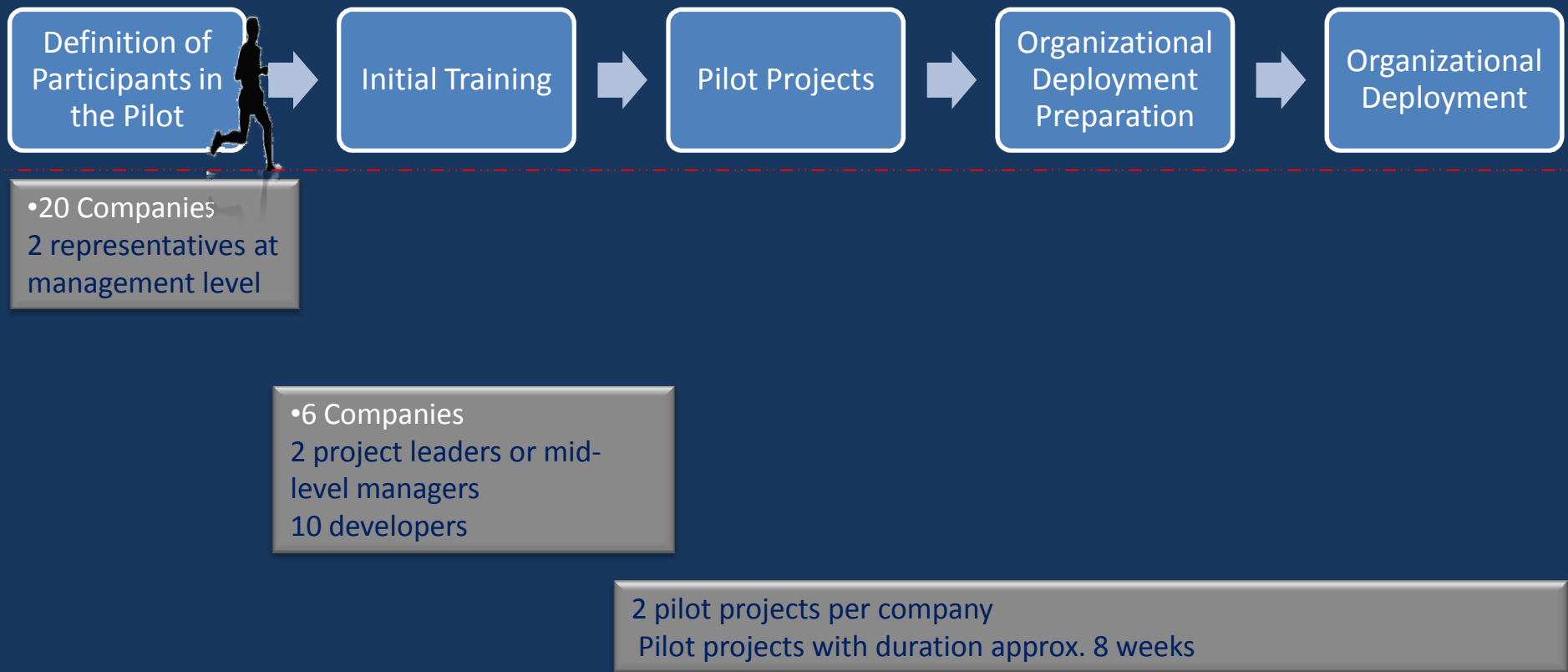


Alcaldía de Medellín

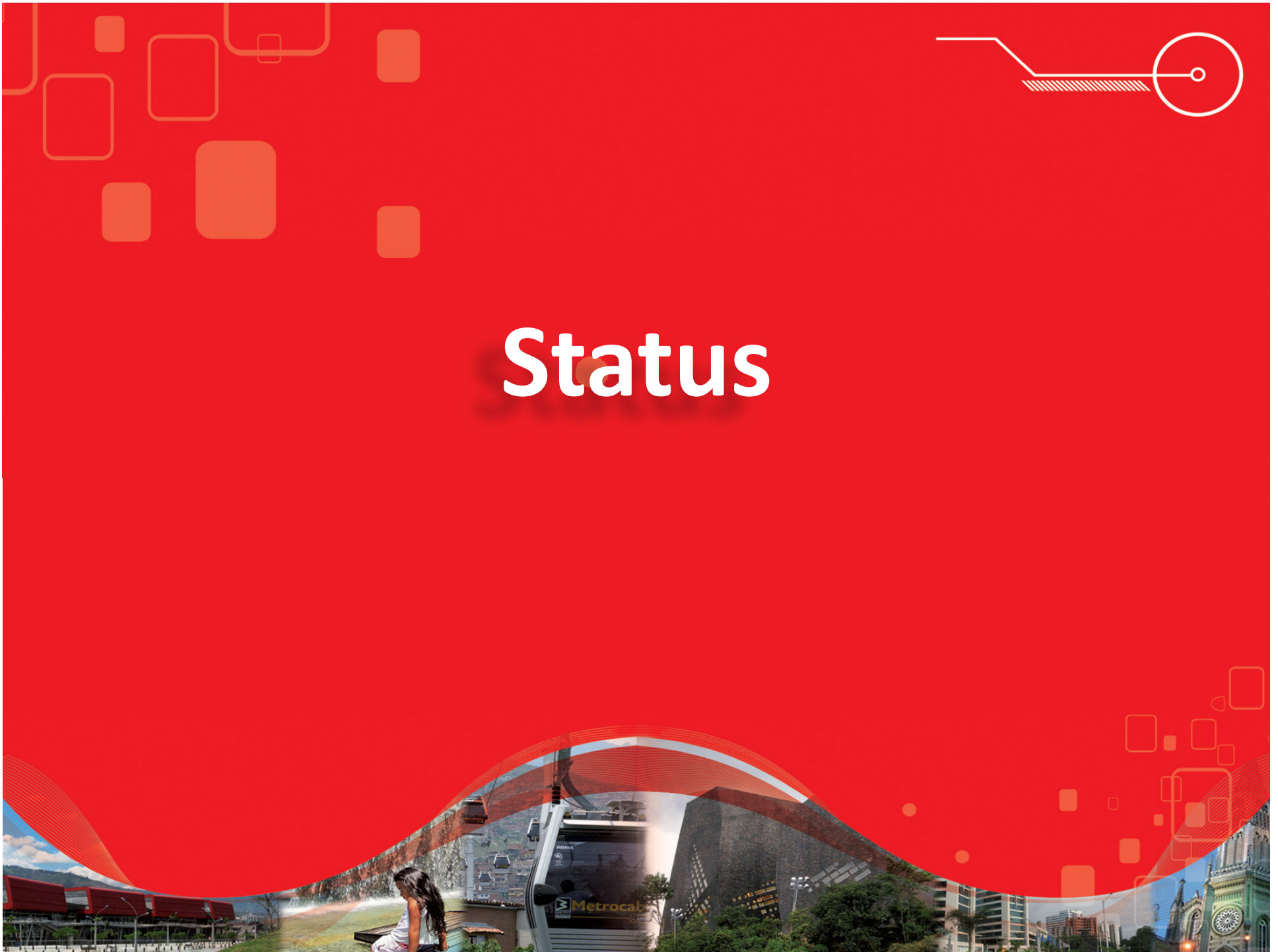
We work together to support agencies at national and local stage:



Part of initiative (Pilot):

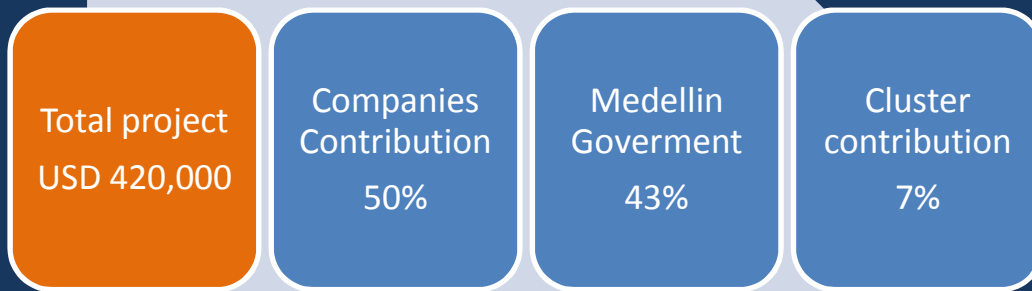


Status



Medellin government bidding process for project, which has the following characteristics:

Phase I



Human talent certified as SEI-PSP
Developers and teamwork of ICT
companies in Medellin using
formal TSP practices

FOLLOWING PHASES : MASSIFICATION OF THE STRATEGY (in management)



The following awareness activities in universities, companies and organizations have been done:

1. Meetings with software industry, entrepreneurs, Academy, where the institutions supported the implementation of productive projects. 25 entrepreneurs from different companies.



2. Conferences at Universities such as Politécnico Jaime Isaza Cadavid, Eafit, under PSP TSP Reference for education. 100 participants between students and teachers.



3. Training in PSP/TSP to allow for productive development of the region, generating a dynamic and productive development.



Among others, SEONTI has performed training for several companies and for internal capacity of local PSP/TSP and CMMI consultants.



SEIPartner

CMMI • TSP

4. Webinars, (Chat, broadcast, etc.) to companies showing the importance of implementing practices in TSP and PSP internal technology teams. 100 employees of companies that have IT departments.





And working on this initiative for the development of Software & IT sector, we have a
sixth edition SEPG Conference Latin America.

Medellín, city of eternal spring awaits you all for the pleasure of attending you and share all our technological capacity that has developed in a bilateral model: from Colombia to the world and the world to Colombia.

MEDELLÍN

SEPG Latin America 2010

 November 10-12

Anfitrión:


Cluster del Software
Colombia



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Find all the information about SEPG LA 2010:




<http://www.esi.es/SEPGLA/>



<http://www.sei.cmu.edu/sepg/>

MEDELLÍN

SEPG Latin America 2010

 November 10-12

Anfitrión:

intersoftware
Cluster del Software
Colombia



Thank you!

*We are looking forward to see you at the
SEPG LA 2010 in Medellín - Colombia*



Francisco Aleman

SEI-Certified TSP Coach

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September 21, 2010

Francisco Aleman

- Founded Delaware Software in 1996
- Currently Marketing and Finance Director
- Previously worked for global company leading software development teams around the world.
- BS Degree in Computer Science from UANL
- MSIT CMU-ITESM Distant program
- Implemented TSP/PSP in 2008
- Certified TSP Coach in 2009

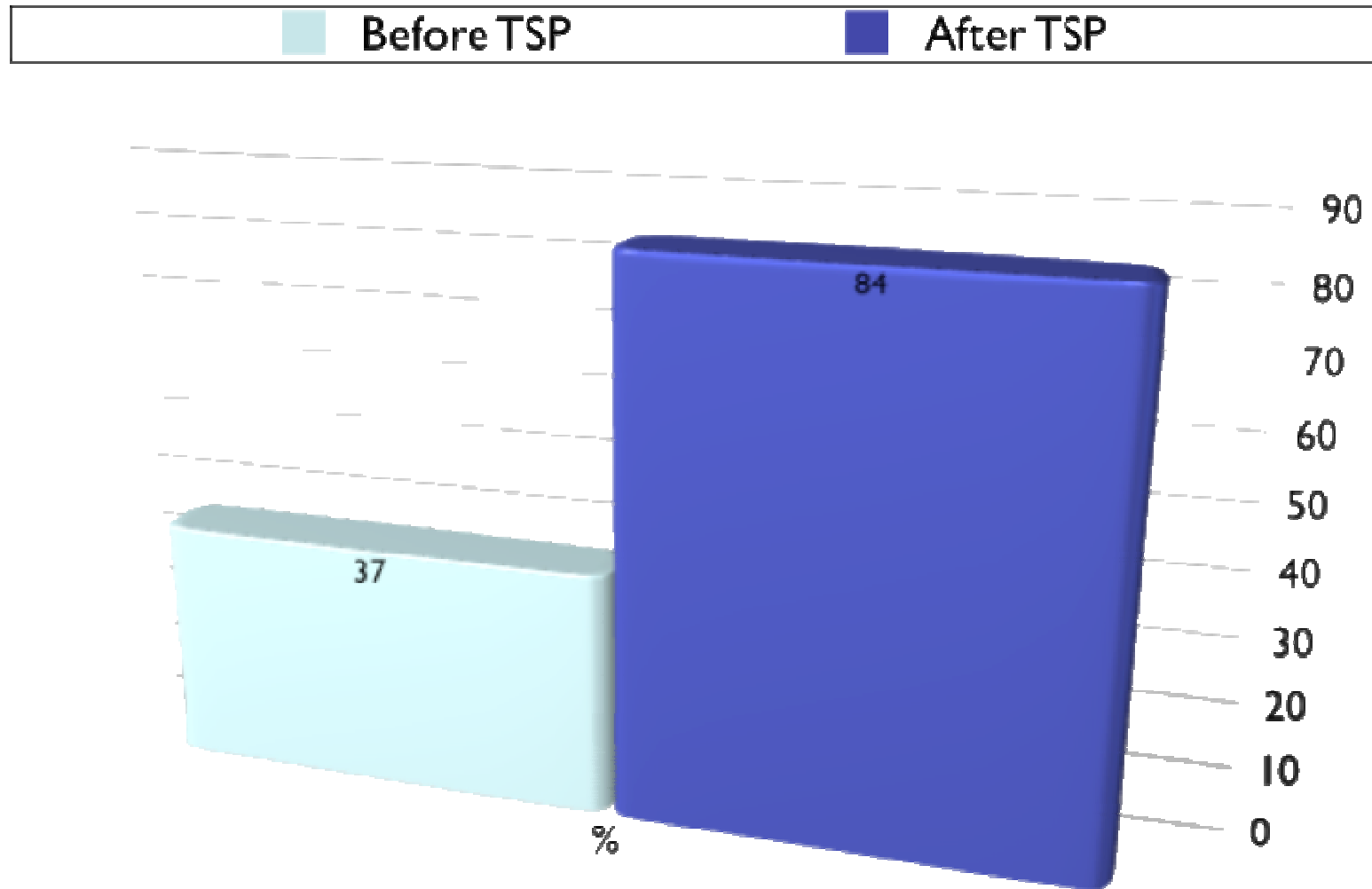
TSP implementation stages

- March of 2008, first exposure
- June 2008, received training
- August 2008, deployed first TSP-driven project
- March 2009, TSP Coach certification

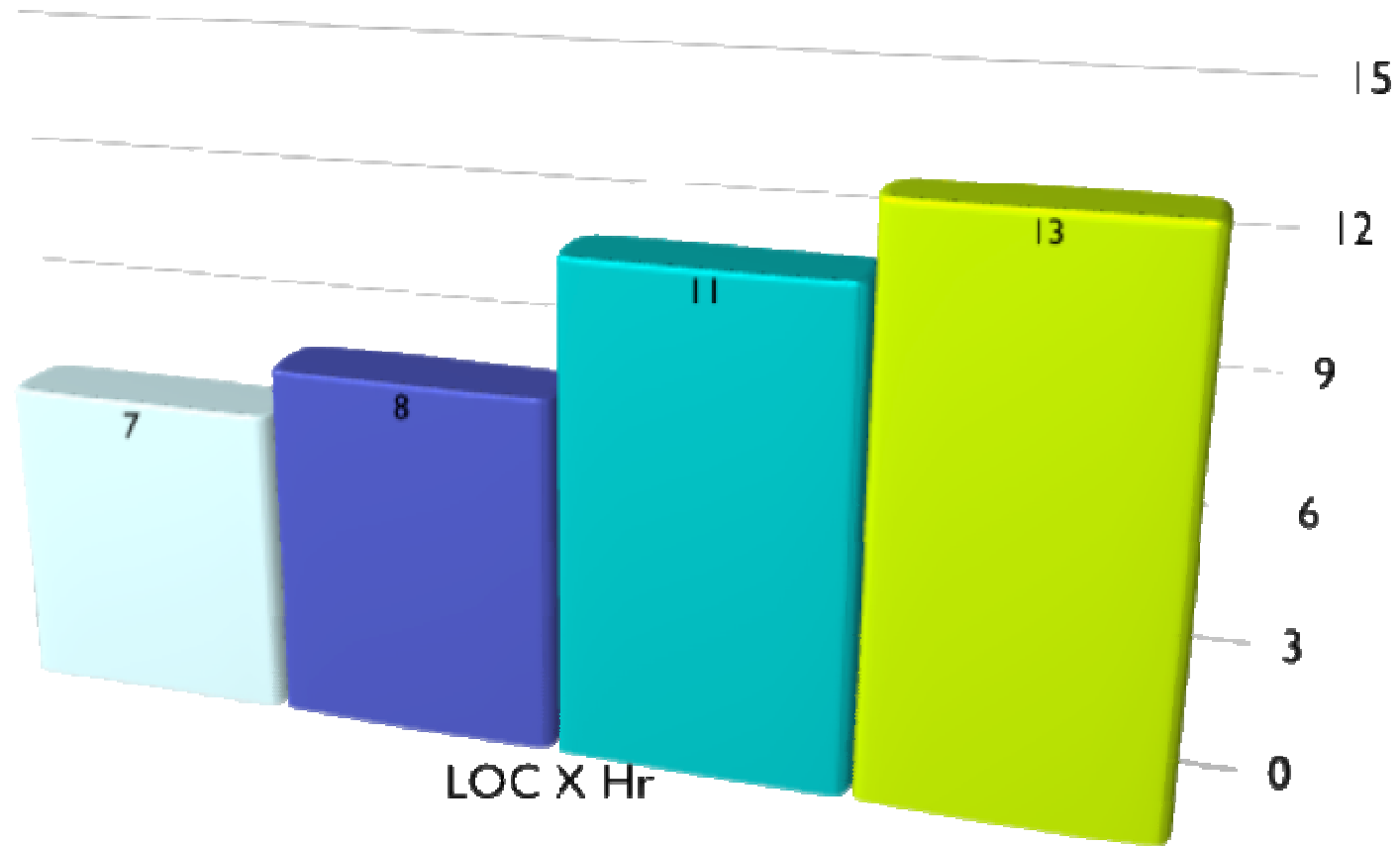
TSP projects context

- Client: Global 500 company
- 7 Certified PSP Developers
- New management applications for the Power Generation Industry
- Platform: ASP.NET, SQL Server

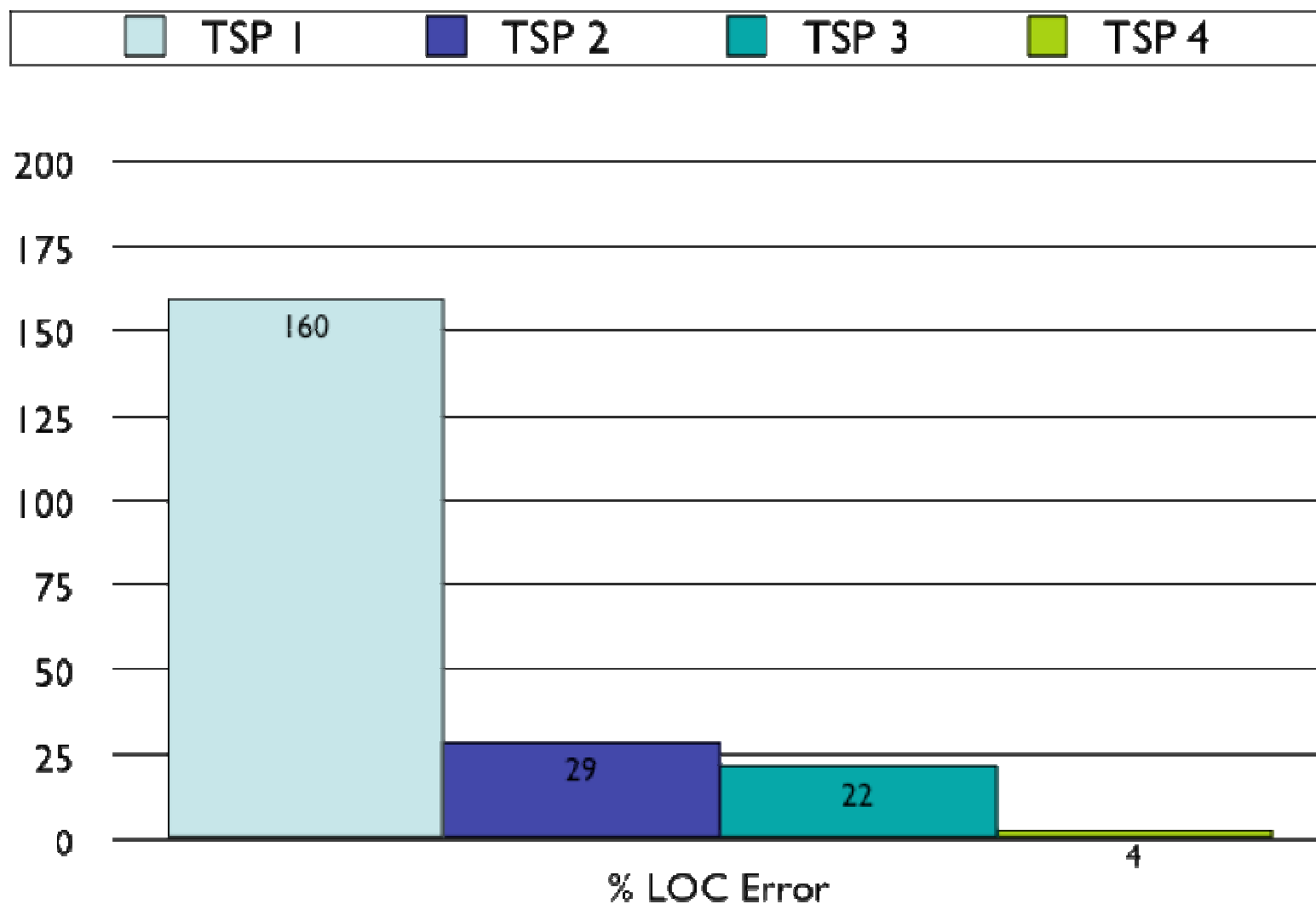
Base and reused code rate



Productivity



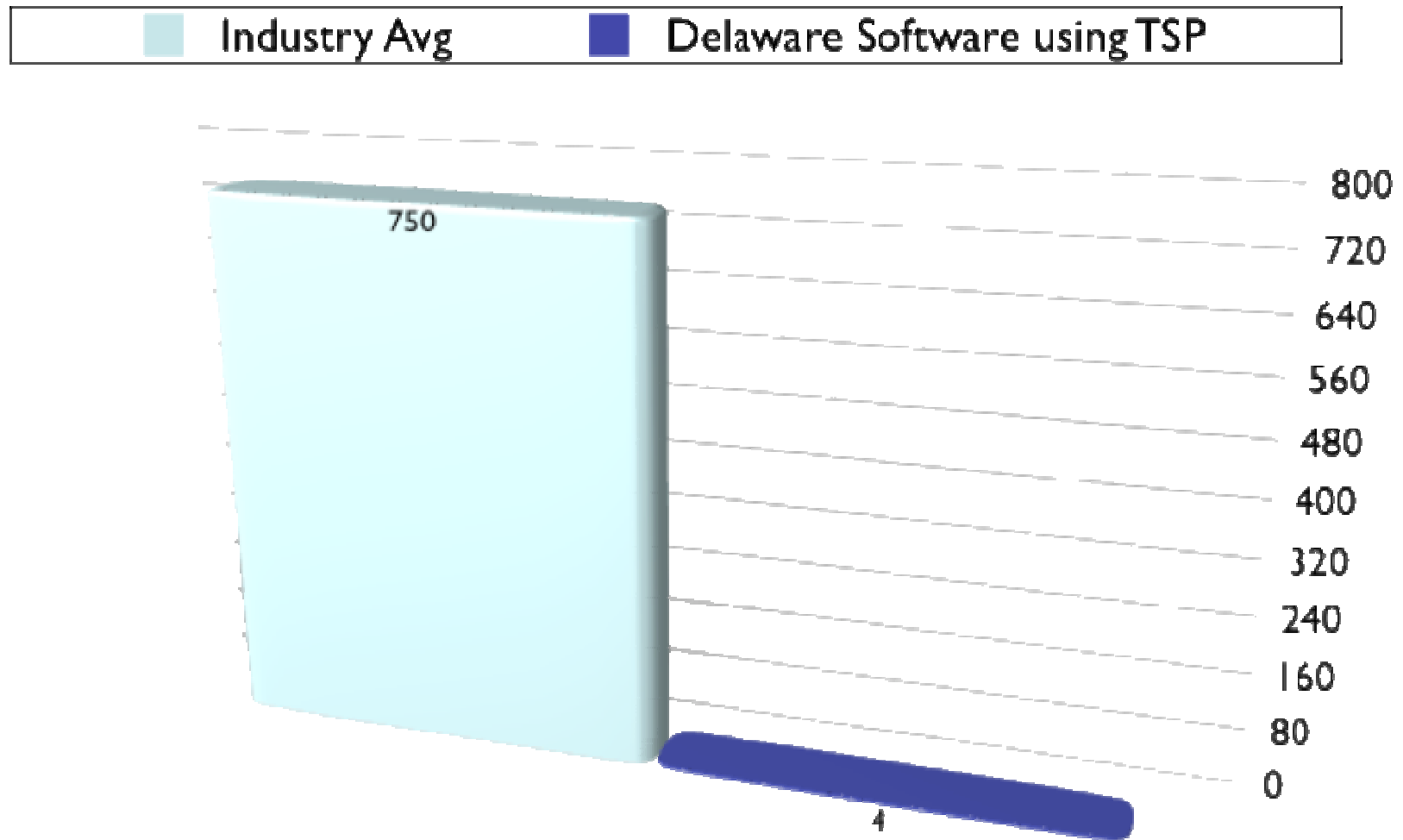
Size Estimates



Time Estimates

1 NON TSP PROJECT AND 3 COMPLETED PROJECTS USING TSP					
	Project (Non TSP)	Pilot 1 (TSP)	Pilot 2 (TSP)	Project 1 (TSP)	Project 2 (TSP)
Time Estimate					
Schedule Weeks (Plan)	23	26	15	31	17
Schedule Weeks (Actual)	26	25	12	29	18
Mean Schedule Error	3 weeks late	1 week earlier	3 weeks earlier	2 weeks earlier	1 week late

Product Life Defects every new 100 KLOC



Source: CMU/SEI-TR-2003-014 / Delaware Software TSP Metrics

Customer Weekly Report



IEM Projects 2009-2010 (Cycle 3)

Week 16th, April 5, 2010

Cycle Progress



End Dates

Base	April 12
Planned	April 12
Estimated	April 12

Project Growth

-2.1 %

Acceptance Test Defects

0 = 0/KLOC¹

Finished Requeriments

Requeriment	CC	Planned Date	Real Date
Ajustes Montos Finales	DIGES	April 7	April 7
Consulta Incidencias	DIGEN	April 9	April 5
Incidencias 2	DIGEN	April 9	April 5

Team Achievements

- Finished requirements were completed on time or before the planed date.
- The team is still ahead of plan.
- The team had a presentation meeting with the staff responsible for the module "Incidencias y Accidentes". Tests during presentation were successful.

Results

- More time for other areas improvement.
- Detailed project documentation.
- No surprises.

Conclusions

- Gelled teams
- Predictability
- Customers trust
- Sales



SEI Partner
Carnegie Mellon®

Engineering the Development of Software

Challenges on TSP Implementation as a Provider Company

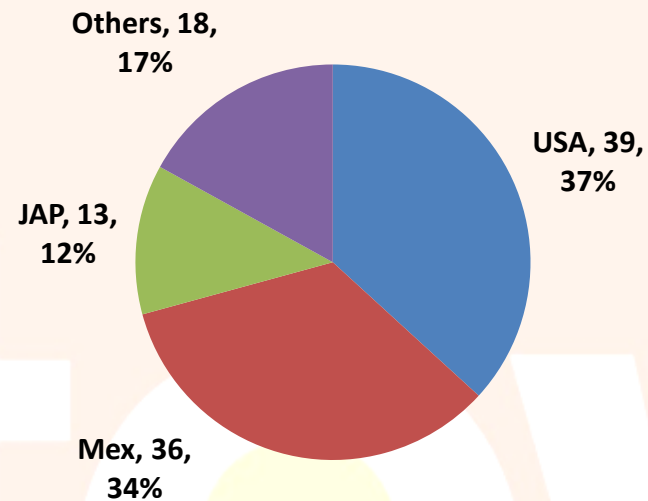
TSP Symposium
Sept. 21 2010

Adriana Gonzalez-Ugalde
Corporate VP TSP Strategy
Towa

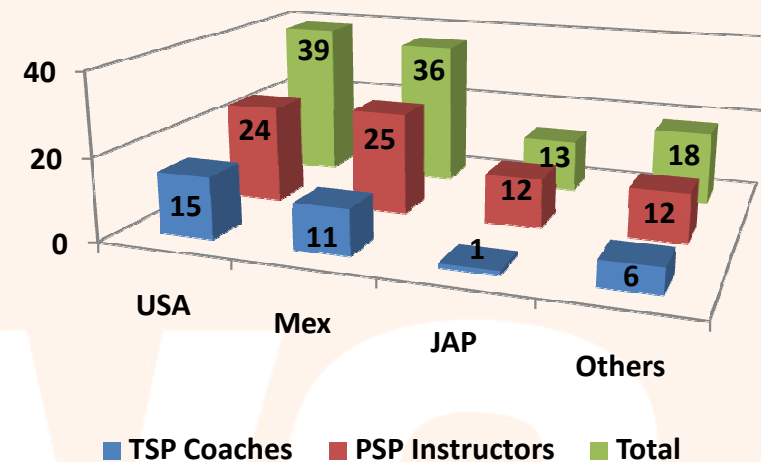
TSP Implementation in Mexico

In 4 years, Mexico's TSP Capabilities have grown rapidly

TSP Coaches + PSP Instructors by Country



Individuals by Country and by Discipline



Source: www.sei.cmu.edu.

TSP, a strategic decision in Towa

Towa was founded in 2004. Today: 200 professionals.

Highest TSP capacity in the world for a private company. 14 individuals: 6 Instructors,

2 Certified TSP Coaches

1 Authorized TSP Coach

5 Trained TSP Coaches

Towa adopted TSP as THE strategy to achieve high quality in software development.

The goal: to become THE BEST company in quality delivered world wide

Learning on implementation

Customers want quality and predictability in their projects.
Developers want to achieve quality results.
The companies want high quality software and savings.

Why is it difficult to implement TSP in an organization?

- ❑ Discipline is a great challenge
 - ✓ The technical challenge
 - ✓ The human challenge
 - ✓ The organizational challenge

The technical challenge

- The customer does not understand TSP and its indicators
 - Train your customer on TSP and coach them too.
- It is difficult to report using the customer traditional formats and to change those formats
 - Propose incremental small modifications to the customer reporting tools, include EV, forecast end date, etc.
- Different tools for PSP training and for project execution
 - Gain tool knowledge from using the same tool for training and for projects.
- Tendency to micro management
 - Work and train team leaders and coaches to manage at a higher level for management, than for each individual

The technical challenge

(one important customer scenario)

- 2,500+ developers working on maintenance, enhancing old applications and (some) new systems (only for Mexico)
- 50+ software executives making decision every day
- Mostly an IBM shop (COBOL, JCL, CICS, DB2, “Altamira”).
+ some Java and Oracle and some other tools
- About 20 Provider Companies (Accenture, Cap Gemini, Indra, Everis, many local companies)
- A wide set of paper “artifacts” that “need” to be produced as an “standard” way of documenting software company world-wide

The human challenge

- False sense of urgency: deliver the product, don't use TSP
 - Reinforce QA through coaching. As management re-state the precedence, first: quality, second: delivery date.
- Team members do not understand roles responsibilities
 - Make a coach plan that introduces incremental knowledge every week
- Lack of culture of discipline
 - Work 1 to 1 coach-team member, ever day!
- Resistance to change
 - Identify the fear beneath the resistance and give reassurance
 - Work first with the individuals that want to use TSP
 - Work 1 to 1 coach-team member, ever day!

The human challenge

It's a HUGE challenge

- ✓ **The sense of control**

- ✓ **Self security**

- ✓ **The sense of “value” as a professional**

is tied to the “old way” the person has been
“doing things SUCCESSFULLY” for many years

The organizational challenge

- Is it going to work?
 - Solution: Bring to scene credible institutions like SEI (Watts Humphrey & Jim Over) and Tec. Monterrey
- Lack of immediate results of the implementation of TSP discourages management support.
 - First project results are not always the best ones you can get, maintain a policy where every new project should be executed under TSP and monitor results.
- Lack of adapted processes for specific tasks
 - Adjust the standard processes or create new ones. Never use a process that does not fit the task!
- Resistance from middle management to the use of TSP
 - Reinforce Coach-Team leader work.
 - Reinforce middle management training on how to manage knowledge workers and on the benefits TSP can deliver.

Thank you

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