Quality aspects in consolidation of IT market

Software Engineering Conference, Moscow

Experience Report

Ukraine is now one of the most dynamic markets of IT and Outsourcing services. In the past 2 years the Ukrainian high-tech sector has demonstrated strong growth, posting a 25% increase in revenue.

The export share in the general volume of IT services is approximately 50% and it is expected to have grown to 60% by 2005.

The industry leaders formed IT association of Ukraine, which represents up to 80% of top-ranked IT outsourcing companies. This community consolidates efforts of the companies in cooperation in the labor market, facilitates them in research and educational areas, representing their members at international events and contacts with the Ukrainian government and large-scale business units. Potential partners have improved possibilities in screening the Ukrainian IT market. IT companies in Ukraine started movement towards European IT Community, and we expect reciprocal cooperation.

The companies – members of IT Association - announced Quality Declaration, with the 1st statement formulated as:
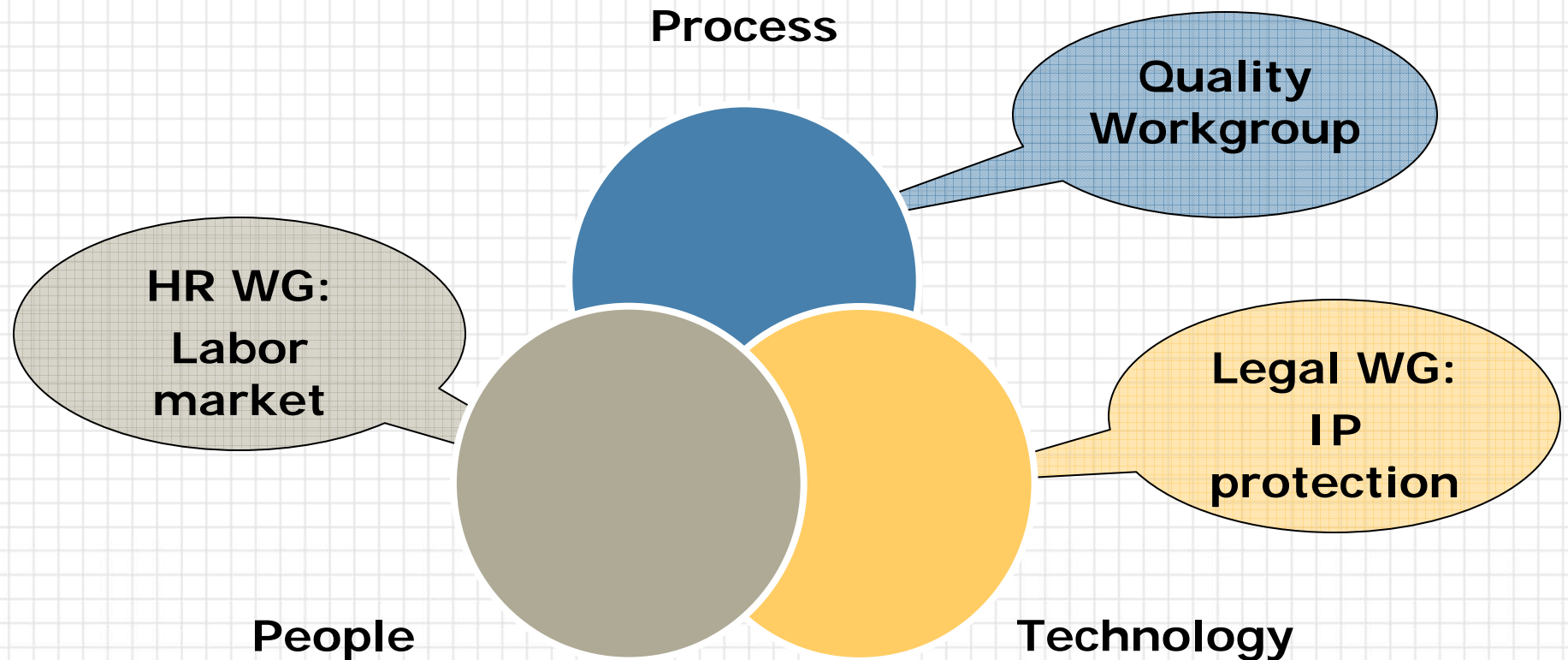
1. In software development and IT service provision, the Companies are guided by the Quality Top Priority principle

IT companies decided to voluntary accept Quality standards, that promises:

- Increase of companies' competitiveness
- Improvement of communication with customers oriented to similar quality standards
- Increase of internal control efficiency
- Cooperation with other companies that support Quality Program

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Quality and International standards play consolidating role for IT companies

Process

Quality Workgroup

HR WG: Labor market

Legal WG: IP protection

People

Technology

- **Quality is efficient**
  - One of the usual thesis is that everything that we are selling or purchasing – is Quality. Nobody needs product or services without controlled quality
  - The world-wide trend is that establishment of effective QMS is most efficient from ROI point of view
- **Backgrounds: ISO**
  - ISO 9001:2000 implements fundamental ideas of Deming and Juran about Process-based Quality Management, Statistical process control and continuous process improvement.
  - ISO 9001:2000 forms an excellent framework for other standards.
  - It serves as a baseline for wide range of IT Companies. ISO 9001:2000 is not obligatory for the members of IT Association, - however, ITU members accept Quality Declaration, based on TQM and ISO 9001:2000

Quality trends: SEI CMMI

- **Integrate application (Systems Engineering, Software Engineering, Integrated Product and Process Development, and Supplier Sourcing)**
- **In-line with the modern ISO/IEC standards - SPICE/ISO15504**
- **CMMI allows embedding of other standards, and could be tuned for customer processes.**
- **More flexible approach to outsourcing services companies, - CMMI is applicable even in IT services domain, and may be embedded into frameworks like ITIL.**
  Note. Servicing organizations form 62% of the total # of appraisal reports, - vs. 46% for SEI SW-CMM

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The Ukrainian IT market becomes friendlier to potential customers due to the policy of software legalization, openness and voluntary commitment to the International Quality standards. The essential is Leadership of National Companies. The major challenge is now SEI CMM/CMMI appraisal of national companies. In 2003, Miratech became the first Ukrainian company at SEI CMM profile. We expect that up to 10 Ukrainian IT companies will pass SEI CMM/CMMI appraisal in 2005-2006.

Intangible values

In ROI analysis of process improvements, the focus is usually on savings in actual work, decrease cost of poor quality, etc. These values are usually estimated in stable business environment, and are bounded within one company, or even subdivision (department, customer account, project or service)
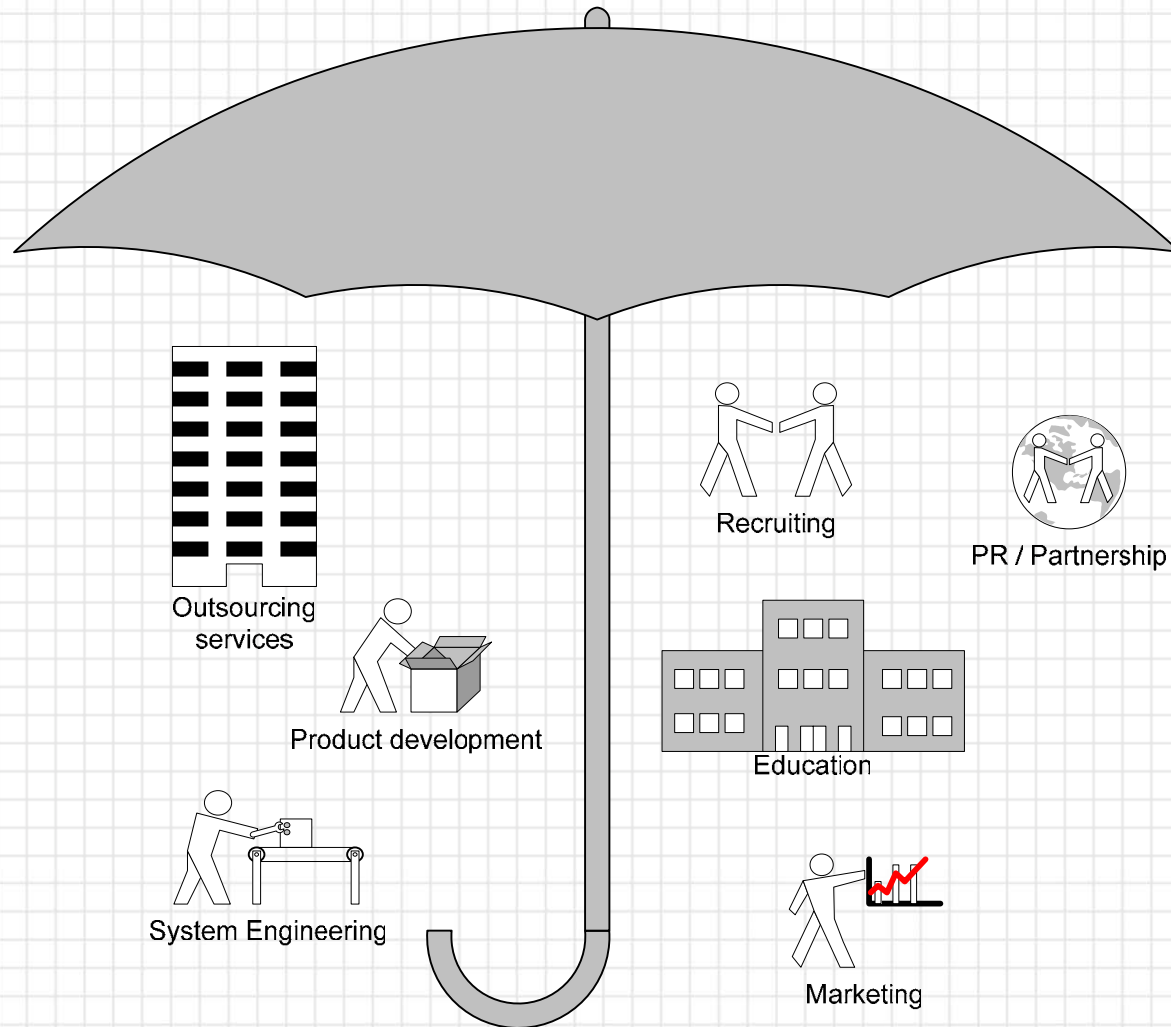
The extended ROI analysis considers the trend of increase revenue in part of new contracts, which could not be signed outside Quality Frameworks

At the level of inter-companies associations, SWE communities, the Intangible values of Excellence models (based on Process and Quality Frameworks), are in the focus.

Quality Framework challenges

- **Market reasons**
- **Image for industry**
  - **Leadership of companies, accepting international standards**
  - **Sponsorship opportunities**
- **Wrap up own practices, to achieve Quality goals**
- **Share / Re-use in-house practices**
- **Collaboration with educational, governmental, scientific bodies**
- **International partnership (non-commercial)**

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Product development

System Engineering

Recruiting

PR / Partnership

Education

Marketing

- **"Extensive factors", making IT outsourcing companies in Ukraine attractive for potential customers:**
  - Lower cost of workforce
  - Peer-to-peer contacts (historical)
  - Sufficient technological culture, based on high educational level
  - Location, traveling, general culture
- **"Intensive factors", being in focus of IT community**
  - Increasing stability and trust, by passing official certifications
  - Openness of IT community
  - Challenge: Development of popular product
  - International recognition of quality, certification, educational boards

Integrated Quality Approach

- ## Process Quality
  - ### ISO 9001:2000
    - Process model independent on professional area (Without "How-To")
  - ### CMMI, CMM
    - Process model focused on SWE with some integration opportunities (With "How-To")
  - ### SWEBOK, PMBOK
    - Body of Knowledge
  - ### TQM (actual practices)
- ## Product / Services Quality
  - ### ISO 9126, FURPS

Consulting
Know-how

Training, Education

Analysis, Re-use

Instantiate process
    frameworks

- **Commercial and in-house organizations are focused on official SEI CMM/CMMI appraisals**

- **The Ukrainian vendors have success stories of making business with world famous companies, demonstrating high maturity level, and requiring high maturity from the suppliers.**

- **Half of the organizations report size of 100 or fewer software personnel. They are usually focused on external customers.**

- **Organizations – ITU members follow the policy of software legalization and Intellectual property protection**

- **The companies are staffed with high educated personnel, usually with Master of sciences degree. The relations with High schools have regular and constructive nature.**

- **Focusing on Quality serves to the improving image of IT companies in Ukraine, leading to the increasing role of Ukraine at outsourcing market**
- **IT community in Ukraine needs a national center, facilitating IT companies in management software quality, standardization and education. This center could be founded in close cooperation with**
  - **International Quality communities, centers and networks**
  - **Governmental institutions**
  - **High schools and scientific centers**
- **Servicing the companies, looking for the partners in Ukraine:**
  - **Compilation IT market research reports**
  - **Benchmarking, facilitation suppliers selection**

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