Open Source Enterprise Resource Planning and Order Management System for Eastern European Tool and Die Making Workshops

“Open Source Enterprise Resource Planning and Order Management System for Eastern European Tool and Die Making Workshops”

June 04th, 2008, Radenci, Slovenia
Buzz words

- ERP (offline-online) - federated
- CRM (online)
- Open Source (Offline product base)
- Tool-and-Die manufacturers (Clients)
- Regional ICTs (business solution/support providers)
- Collaboration and industrial clusters/ network
- Transfer of knowledge based from Western to Eastern Europe T&Ds

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Open Source

- Not free – but much low price based on license
- Advance service network
- Better quality in terms of stability
- Better support in product development and integration
- More channels for support and customization
Need identification

- **Networked business**: Key success factor in global market arena
- **Integrated support system**: To survive in an industry which is dominated by large multinational enterprises
- **SMEs** do not have resources for the implementation of **complex ERP Systems**
- Functionalities of standard ERP applications do not fulfil the specific **requirements for SMEs**

![Pie chart showing common and specific functionalities]

- Common functionalities (30%)
- Specific functionalities (70%)
Spread of ERP applications:
For 500 largest firms in Poland

- 51% with ERP
- 14% currently implementing
- 8% without, planning to implement
- 8% without, not planning to implement
- 19% other answers

Lack of ERP assignment

- In comparison to Western Europe and USA the support with ERP systems is very low
- For example 95% of the German enterprises with more than 500 employees have an ERP system

Potential for the Software Vendors

- Average sales growth of 12% (Western Europe: 6%)
- ERP (CRM) market volume in 2002 in Eastern Europe was 165 Mio. € (20 Mio. €) and will increase with average sales growth until 2007 to 195 Mio. € (26 Mio. €)

Source: Argos, 2002
Source: Gartner, 2004
**Problem Statement**

Disadvantages:
- Administrative expenditure and cost
- Isolated structure
- Lack of software flexibility
- Insufficient support of business
- Operating cost are too high

ERP System X

ERP System Y

ERP System Z

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Introduction (Hierarchical focus for research)

- ERP tools have **no segregation** at industrial level
- Focus has been on the distributed units of large enterprises

Analysis of current industrial needs
- Lack of **affordable** ERP applications for SMEs
- Existing ERP solutions do not support **common** platforms
Project expertise and Vision

Research experts

“To enable Eastern European SMEs to participate and collaborate in Dynamic Business Networks by Developing open source Enterprise Resource Planning (ERP) application with Customer Relationship Management (CRM) functionalities”

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Research

Tool&Die

IT

Matching functionalities

Business process analysis

Software requirement analysis

Open-Source Community

Choosing legacy software

Tool-East Consortium

Development of OS TE-ERP

Existing features

Final requirements

Project status - Technical

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Project overview

ICT validation

ANALYSES

Organisational process validation

Needs and requirements catalogue
Legacy system selection
Evaluate interfaces
Integration and training

Start PM06 PM12 PM18 PM24 PM30

PM06
PM12
PM18
PM24
PM30

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Objective overview

✓ Module I: Definition of a generic business process model for Tool-and-Die making workshops

✓ Module II: Open source software architecture and application development
  ▪ Adaptation and improvement of one existing open-source ERP solution;
  ▪ Development of another new open-source ERP application is not ambition

✓ Module III: Standard interfaces for open-source applications

Module IV: Customised training and education

Achieved

Ongoing steps
IT Focus: Process flow

Specifications:
- Web services driven application
- Inter platform communication
- Open source application
- Consistent customer orientation

Advantages:
- Common standardized interface
- Smooth sync in & sync out
- 1 to 1, 1 to many & many to many communication channels
- Flexibility of use and development
Main Stakeholders

Regional ICT
- IT-Service provider
- Based locally
- Deep knowledge of OpenSource Technology and ERP

Developer/OSC
- OpenSource developer distributed around Europe
- Communities enhancing the maturity of TE

ASP
- Company hosting Tool-East solution
- Providing implementation and maintenance service

Market Place
- Providing a trading platform for customer and vendors of T&D
- Enabling reverse auctioning

T&D Client
- Customer of T&D products
- Browsing to the product catalogue online
- Initiating an order

T&D Vendors
- Supplier of goods for T&D company
- Offering products via the trading platform

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Tool-East Scenario Overview

Portal Users

T&D-Clients

T&D-Supplier

T&D

Regional ICT Service Providers

Open Source Community

Tool-East Portal

Industrial Marketplace

Public
- T&D directory Search
- Registration

Members (CRM)
- Partner matching
- Data exchange
- Order / client Mgt

ERP hosting

Developer's site
- Software Host
- Dev. & Exploitation

Additional Services
- Web adds,
- Technical tips,
- Cross selling …

Tool-East Portal provider

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## Tool-East product concept

### Standalone

### ERP-Hosting
- Portal
- Security
- QoS
- User-Mgmt

### Market-Place

#### Trading-Platform
- Portal
- Security
- QoS
- User-Mgmt

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>T&amp;D; RICT; OSC</th>
<th>T&amp;D; RICT; OSC, ASP</th>
<th>T&amp;D; RICT; OSC, ASP, Market Place op.</th>
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<tbody>
<tr>
<td><strong>Features</strong></td>
<td></td>
<td></td>
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<tr>
<td>• Basic ERP-Functionality</td>
<td></td>
<td>• Hosting of ERP application</td>
<td>• Trading platform (B2B) – Purchase as well as Selling</td>
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<tr>
<td>• Easy to use and customized for T&amp;D needs</td>
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<td>• Outsourcing of ERP-development and maintenance</td>
<td>• Collaboration platform – Company profiles</td>
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<td>• Build and Run by/with RICT support</td>
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| **Benefits**         |               |                     |                                      |
| • Open Source with good cost/benefit relation |               | • Reducing fix-cost | • Innovative sales channel |
| • Safeguarding further development |               | • Outsourcing of customizing and maintenance | • Bundling purchase activities |
Unique Selling Proposition

- Differentiation potential for outmost in the functional coverage and in the cost
- (OpenSource) Maturity is not that relevant for closed-software
- Architecture is not a differentiating characteristic
- Dimensions are derived from studies and verified in expert interviews

=> Based on the USP the most probable market share of Tool-East could be estimated

Source:
ERP-Z Zufriedenheitsstudie, Trovarit; TE-Deliverable 3.2; Expert Interviews during the conference EPR-Days in Aachen

Legend:
- Closed Software (avg)
- Open Bravo
- Tool-East

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Industrial support perspective

Organizational Structures
Operational Structures
Information Structures
Knowledge workers

Enterprise

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Commutative functionalities to user benefits

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Time to market maturity of revenue streams

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<th>Revenue</th>
<th>Time to market maturity</th>
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<tr>
<td>High</td>
<td>Extended</td>
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<tr>
<td>Low</td>
<td>Short</td>
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- TE-ERP Hosted Solution
- TE-Marketplace
- TE-ERP Standalone

2008...9

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Tool-East Consortium

- 3 Research Institutes
- 7 partners from Tool-and-Die making industry
- 5 partners from IT-Sector

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Next events in June 08

17th of June - Celje: Regional Chamber of commerce and TCS
  • Training session and product overview

23rd/24th June - Belgrade: TCS & Regional chamber of commerce
  • Intro session and standalone product overview

3rd week of June - Trieste: INSEAL
  • Intro session and product overview

Last week of June Sofia: IT-Partners
  • Intro session and product overview
Thank you for your attention!

Tool-East strengthening the role of SMEs in Europe’s success

...the project website
www.tooleast.net

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