

Architecting Lean Software Enterprises: The TODC Story

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Agenda

- **Principles-based approach to enterprise design**
- **TODC viewed through Enterprise Principles**
- **Towards a theory of software enterprises**

Principles-Based Enterprise Design

1.

Adopt a holistic approach to enterprise value creation.

2.

Identify relevant stakeholders and determine their value propositions.

3.

Focus on enterprise effectiveness before efficiency.

4.

Address internal and external enterprise interdependencies.

5.

Ensure stability and flow within and across the enterprise.

6.

Cultivate leadership to support and drive enterprise behaviors.

7.

Emphasize organizational learning.

Source: J. Srinivasan, Nightingale D., "A principles based approach to enterprise design", LAI Working Paper Series, MIT 2008

Research Evolution



EuroTel Field Work (Jan)
• 8 semi-structured interviews (SLT)

Workshop (March)
• 16 participants from both organizations
• Participant observation and survey data

TODC Field Work (March)
• 16 semi-structured interviews
• Project data

TODC Field Work (August)
• 7 Project team interviews
• Second round of senior leadership interviews

- **Balancing Agility and Discipline in Software Development**
- **Driving Enterprise Agility**

Holistic Enterprise Value Creation

- **Balanced portfolio**
 - Product Ownership (2/7)
 - Product sustainment (4/7)
 - Knowledge Workers (1/7)
- **Growth opportunities for employees**

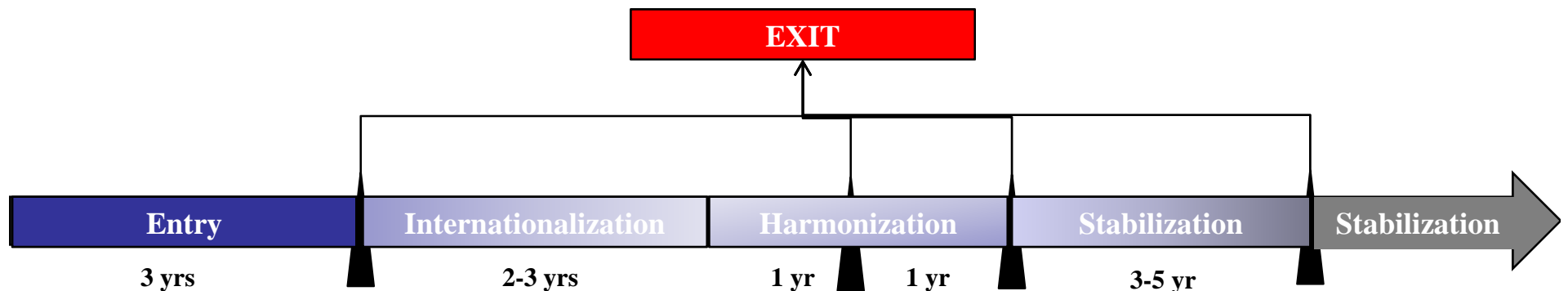
‘We are very aware of the socio-economic pressures that our team members face...’

- **Freeing up resources for EuroTel**

‘In the end, they [EuroTel] have to acknowledge that we do the job better than they can, for a lot less money..’

Managing Stakeholder Expectations

The value that they get is in the training in problem solving and improvement in the fundamentals such as data structures and algorithms – not in the learning the hottest new thing’



- **Employees**
- **Customers**
- **Corporate**
- **Employee's families**
- **Society**
 - Local community
 - 'India Advantage'

Focus on Effectiveness

'We have the best insight into product improvement opportunities as we are carrying out the sustainment... Over the last two years, we have consistently improved both the documentation and the quality of the final product... Our internal team identified twenty improvement opportunities, and executed on some of them using our own funds. As a result, the customer is now cofunding some of the improvements.....Our goal is to have complete product ownership, and we have to demonstrate value in order to do that.'

- **Investing in growth**
- **Leveraging process improvement gains to support learning**

Addressing Interdependencies

- **Tailored processes to meet EuroTel and IndiaCo standards**

‘There is a challenge in that our processes are more mature than those of our client, and while they expect stringent performance on our side, their own processes are often lacking’

- **Creating a process for successful knowledge transfer**

‘We were not given sufficient anything... People would give us just enough information to stay out of trouble.... My team made sure that our leadership knew ... My project manager at the time recognized that in some cases, the client really didn’t have the data or documentation, and tasked us to essentially recreate it... it was a grind.. We have now institutionalized the process...’

Ensuring Stability and Flow

'Most young hires want to work on sexy technologies such as Java or .NET that will immediately improve their market value in six months... We make sure that they understand that it will take them at least a year to understand the product itself, and that they would be using customer proprietary programming languages and platforms.'

- **Rigorous selection of personnel**
- **Augmented with a 3 year 'commitment' to the TODC team**
- **Team interviews for lateral hires**
- **Rotation across the project portfolio**

Cultivate Leadership at all Levels

- Significant percentage of their leadership team is grown from within the organization
- “The IndiaCo Way” – plus TODC leadership development program
- Leaders as Teachers

‘You have to earn your place within the team. I had one person wanting to join my team, with over ten years of experience. ... emphasized that he would be starting as a project leader, and not a project manager... prove his abilities to the team as a whole, then we would definitely fast track him...six months later he really did not want to transition into the project manager role’

Enable Organizational Learning

'The hardest part with the young professionals is keeping them focused. ... I am required to review everyone's learning plans and sign off on their applications for taking

Since the plan is online, and a student may request as many courses as he/she wants (prior to obtaining approval), HR often sees that there are unapproved courses. and starts harassing me to either

Systemic

- 20 hours of training per year

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- Structured learning program

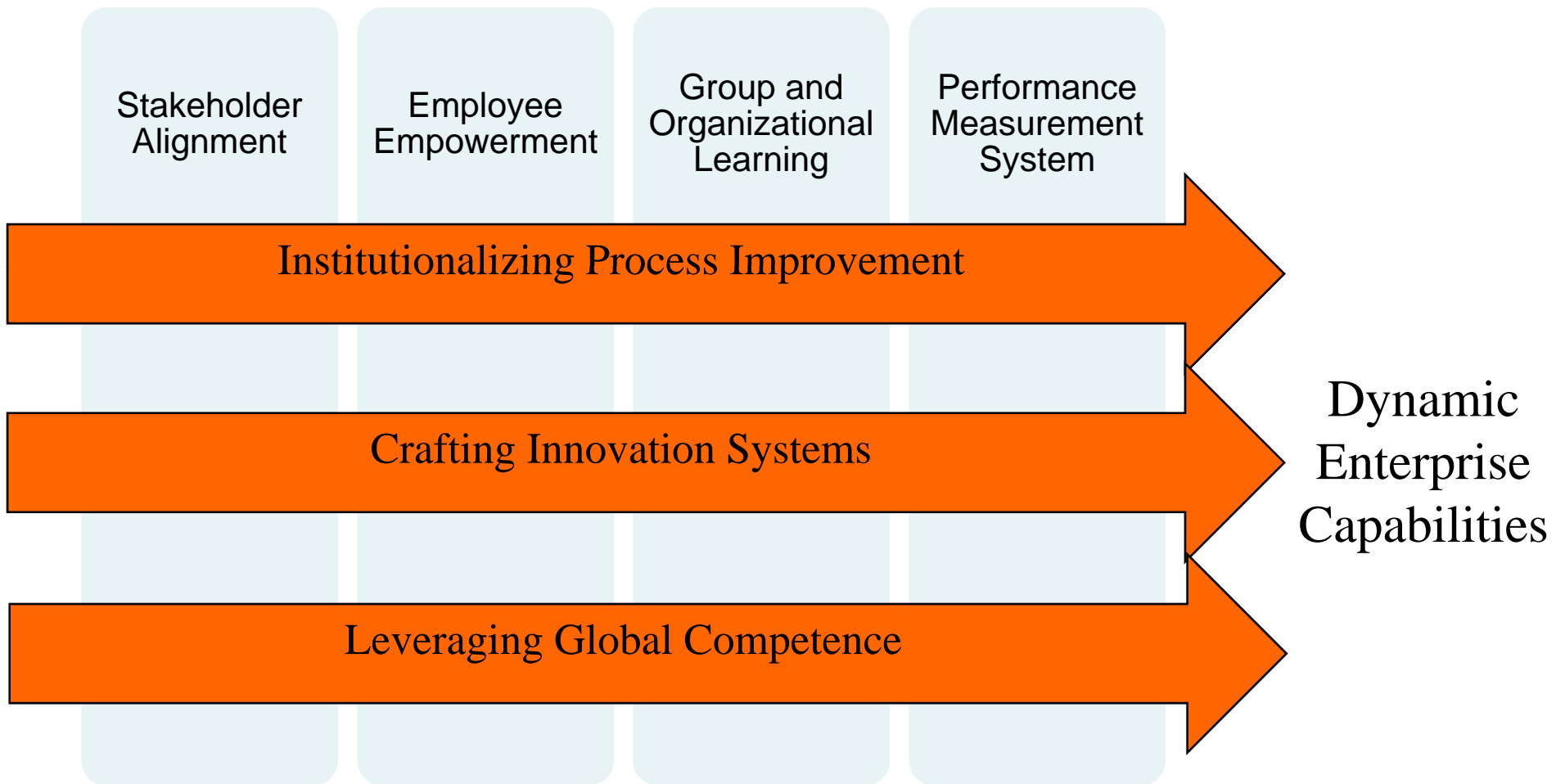
- Leaders as Teachers

Organic

- Peer-to-Peer mentoring
- Formalized knowledge transfer from the client

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Towards a Theory of Software Enterprises



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Questions?

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