

Information Networking in the Construction Process

External Evaluation

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Objectives of Evaluation

- Are industry's expectations being met by the VERA programme. In other words do the projects completed so far deliver meaningful results that industry can apply?
- How well are the results of the projects disseminated? Are the results published in a form that industry can readily comprehend? Are the mechanisms for dissemination appropriate?

Objectives of the Evaluation

- How is industry applying the results of the completed projects? What are the indicators that would demonstrate change and improvement? What evidence is there that individual companies have developed initiatives as a direct consequence of completed projects?

Objectives of the Evaluation

- Have the improvements identified by the projects have been realised on other projects. In other words can individual companies confidently state: “in working this way I can expect to achieve these results”. In other words are the results predictable?

Objectives of the evaluation

From the projects evaluated, what can we learn in terms of progress to date? Are we happy that the 5 main development areas of the programme together represent the whole picture? Have any of the projects challenged this view? If so where have they, and should we be modifying our objectives?

Given what we now know, where do we think the areas of emphasis need to be in the second half of the programme?

Methodology

- Project selection process
- Interview Brief
- Recorded interviews against VERA objectives
- Project review document
 - Context/ Objectives/ Needs/ Achievements
 - Barriers/ Application/ Learning
- Preliminary results

Summary of projects

- Process Projects
 - RECO
 - FINNCORE
 - PROPLAN
- Wide Utilisation of IT in the building industry
 - Benefits of IT in the Construction Industry
 - Transfer Methods for Trade Information
 - PROPLAN

Summary of projects

- Raise the quality of information management.
 - PROPLAN
 - FINNCORE
 - VIRAPS
 - Information Networks in FM
 - Project Servers for SME's

Summary of projects

- Information management over the building lifecycle
 - RECO
 - FACI
 - Information networks in FM
- Use of information networks
 - VIRAPS
 - Transfer Methods for Trade Information
 - Project Servers for SME's

Key observations

- The value of the evaluation process
 - a number of those interviewed said that they found the interview very helpful - it was an opportunity to reflect on the project.
 - they would like to see my notes and observations to inform further projects
 - it has been a great opportunity (perhaps for the first time?) to understand the depth of learning - the 'body of knowledge' that has been accumulated.

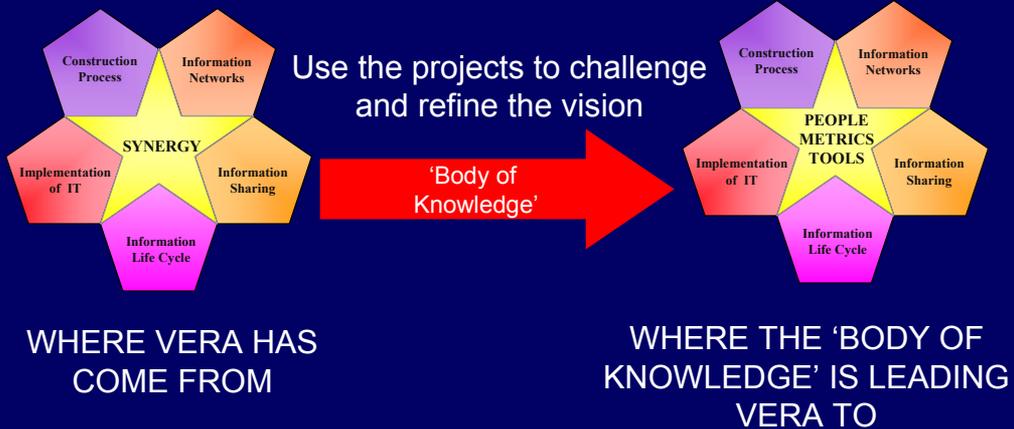
Key observation

- A body of knowledge is being accumulated
 - so how does the VERA programme make that knowledge explicit - how does the Finnish Construction Industry learn from it?

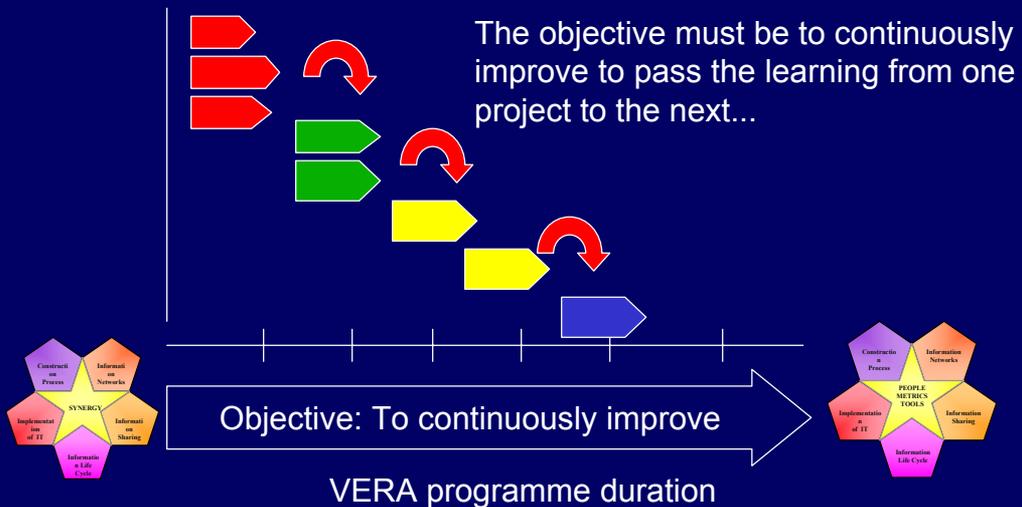
How well are the results of the projects disseminated? Are the results published in a form that industry can readily comprehend? Are the mechanisms for dissemination appropriate?

Learning from projects must be gathered and assimilated. It must be shared within the VERA projects community.

Recommendation (1)



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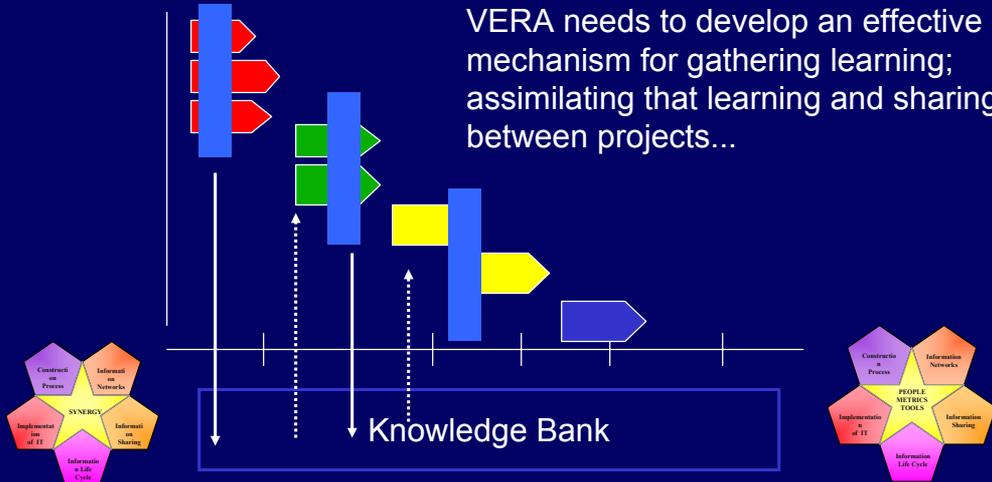
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A resource is needed to harvest the 'generic' learning from projects - to build a 'body of knowledge' for the Finnish Construction Industry.

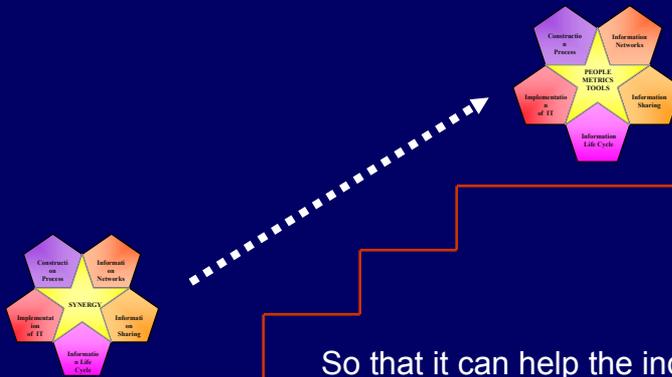
(whilst protecting the intellectual property of the industrial partners)

Recommendation (2)

VERA needs to develop an effective mechanism for gathering learning; assimilating that learning and sharing between projects...



Recommendation (2)

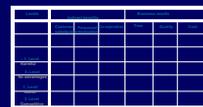


So that it can help the industry to 'mature' to deliver the benefits outlined in the pre-study...

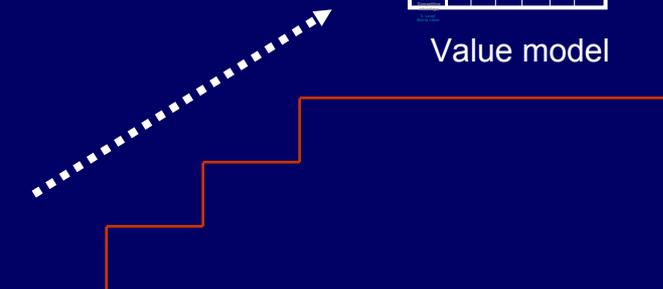
Metrics must be used to show why there is a need for change and what the benefits of that change will be - the industry need to develop a 'value model'. Without such a model change will be slow to take place. The TIMI project should become the basis of that model.

Recommendation (3)

Change will arise when individuals can see the benefit of change...



Value model

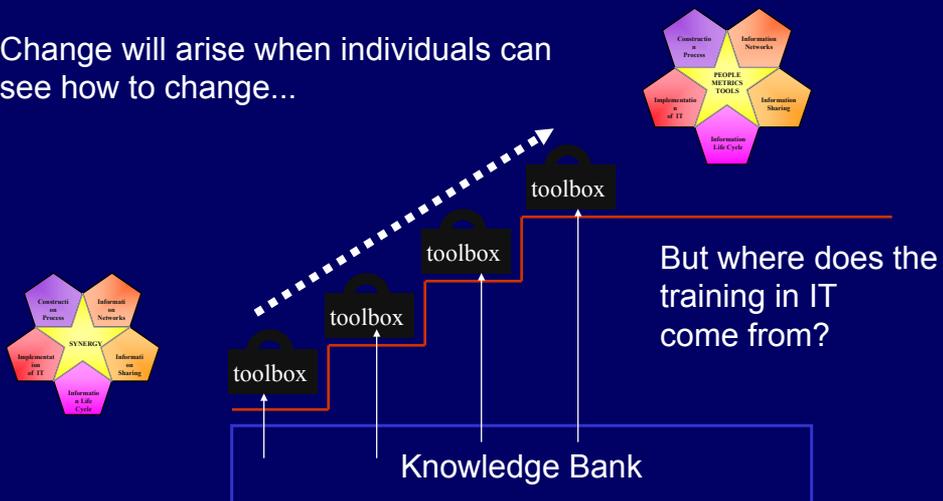


'Measuring the Benefits of IT'

A 'toolbox' should be developed to show to companies wishing to improve what they need to do to change. The 'packaged' learning from projects should be addressed to their level of maturity.

Recommendation (4)

Change will arise when individuals can see how to change...



Recommendation (4)

Developing a CI Plan
Resources
How to guides
Training needs
Information mngmnt
Dev' IT infrastructure
Standards



The pre-study showed that the lack of IT skills and know how in the industry is a major barrier to the wider implementation of IT.

Recommendation (5)

The VERA programme should add a further development area:

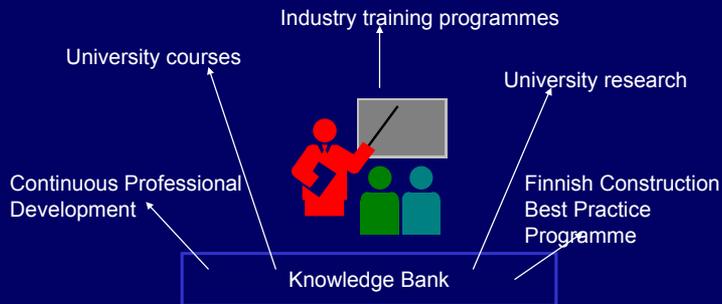
“To enable people in organisations to implement change”

Recommendation (5)



Projects need to recognise the skills of the project participants. They need to be more methodical about defining the skills/ competencies of the team members. Better project briefing is needed. This is a common problem on research + development projects generally.

Recommendation (5)



The value of the 'knowledge bank' needs to be exploited for the benefit of the whole industry.

Process models are not an end in their own right. They are the tool by which we can control the delivery of construction.

Recommendation (6)

The VERA programme should amend the definition of 'Re-engineering of building process' to add:

“The development of process control tools will enable the control of production based on common process models”

Recommendation (6)

There is a significant 'body of knowledge' concerning IDEF 0 process models - surely there must be some benefit in gathering these together to build a reference model for the Finnish Construction Industry?

..at least to use them as a basis for future projects?

Summary of Evaluation

- Are industry's expectations being met by the VERA programme. In other words do the projects completed so far deliver meaningful results that industry can apply?
- Where projects are able to it is because partners have developed the skills and competencies to apply the knowledge.

Summary of Evaluation

- How well are the results of the projects disseminated? Are the results published in a form that industry can readily comprehend? Are the mechanisms for dissemination appropriate?
- This needs to be improved. Learning needs to be assimilated - the interview process illustrates the value of this. Dissemination + gathering methods need to be developed.

Summary of the Evaluation

- How is industry applying the results of the completed projects? What are the indicators that would demonstrate change and improvement? What evidence is there that individual companies have developed initiatives as a direct consequence of completed projects?
- **Metrics need to be developed. There is much anecdotal evidence as indicator for change. However companies are changing, but the rate of change could be faster.**

Summary of the Evaluation

- Have the improvements identified by the projects been realised on other projects. In other words can individual companies confidently state: “in working this way I can expect to achieve these results”. In other words are the results predictable?
- **There is evidence of this, but it relies much on appropriate skills being available to apply the learning. There is much evidence for the need for improved training and education.**

Summary of the evaluation

From the projects evaluated, what can we learn in terms of progress to date? Are we happy that the 5 main development areas of the programme together represent the whole picture? Have any of the projects challenged this view? If so where have they, and should we be modifying our objectives?

Progress could be improved. Improved awareness and training would improve rate of progress. Programme needs to study the 'people' issues.

Given what we now know, where do we think the areas of emphasis need to be in the second half of the programme?

Improved dissemination. Packaged learning. Training + education. Improve the involvement of the wider industry.

I believe that Finland has much of the technology it needs to drive forward with its VERA programme. The focus should be less on the development of new technologies, but more so on how these technologies need to be applied, and the development of the skills needed to apply them.

Context of this work internationally

- Finland is not alone in addressing these issues - but she has a unique opportunity to take an holistic view of them, because of the TEKES approach
- The VERA programme in my opinion is unique in that it attempts to define a complete picture for an Information network

Build on the achievements!

