LET'S REALLY LEARN FROM PROJECTS

A Study on Learning in Project-Based Organizations

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Reference

- Bassam Hussein. Let's really learn from projects: A study on learning in project based organizations- The Ivar Aasen project. Fagbokforlaget 2020.

Benefits of learning

- Learning is correlated with improved performance (Love et al. 2003).
- Avoid making the same mistakes (Brady and Davies 2004)
- Avoid the risk of experimentation (Shaw 2017).
- Organizational success (Cooke-Davies 2002)
- Improve project management processes (van Donk and Riezebos 2005).
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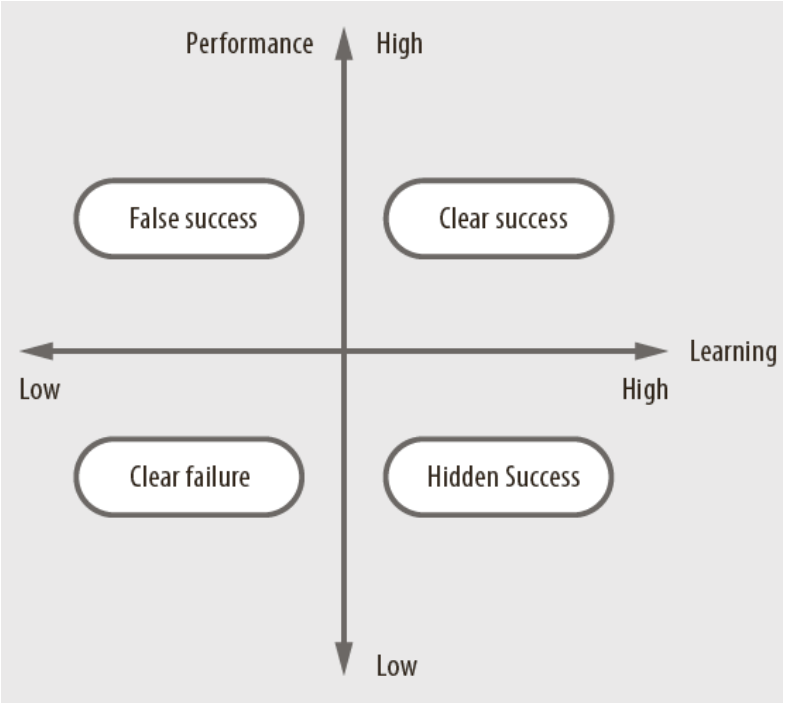


In reality ……

Our problem is not the mistakes we make during projects. Mistakes are useful because they help us to be aware of our shortcomings. The problem is the sense of the déjà vu we feel during each new project when we make more or less the same mistakes. It is frustrating to everyone.

What can we do?

Making sense of the problem

*What should be done order to **enable** individuals and teams to **learn** during projects?*

can we just tell them: learn now!?

What is the evidence of this learning? Are we really learning during projects?

can we just ask them: did you learn?

*Are we able to **capture, disseminate and reuse** what was learned in the next project or to the wider organization? **How can we do that?***

How can we tell that individuals and the organization have learned from the experiences of the completed projects?

It's complicated...

Why it is complicated?

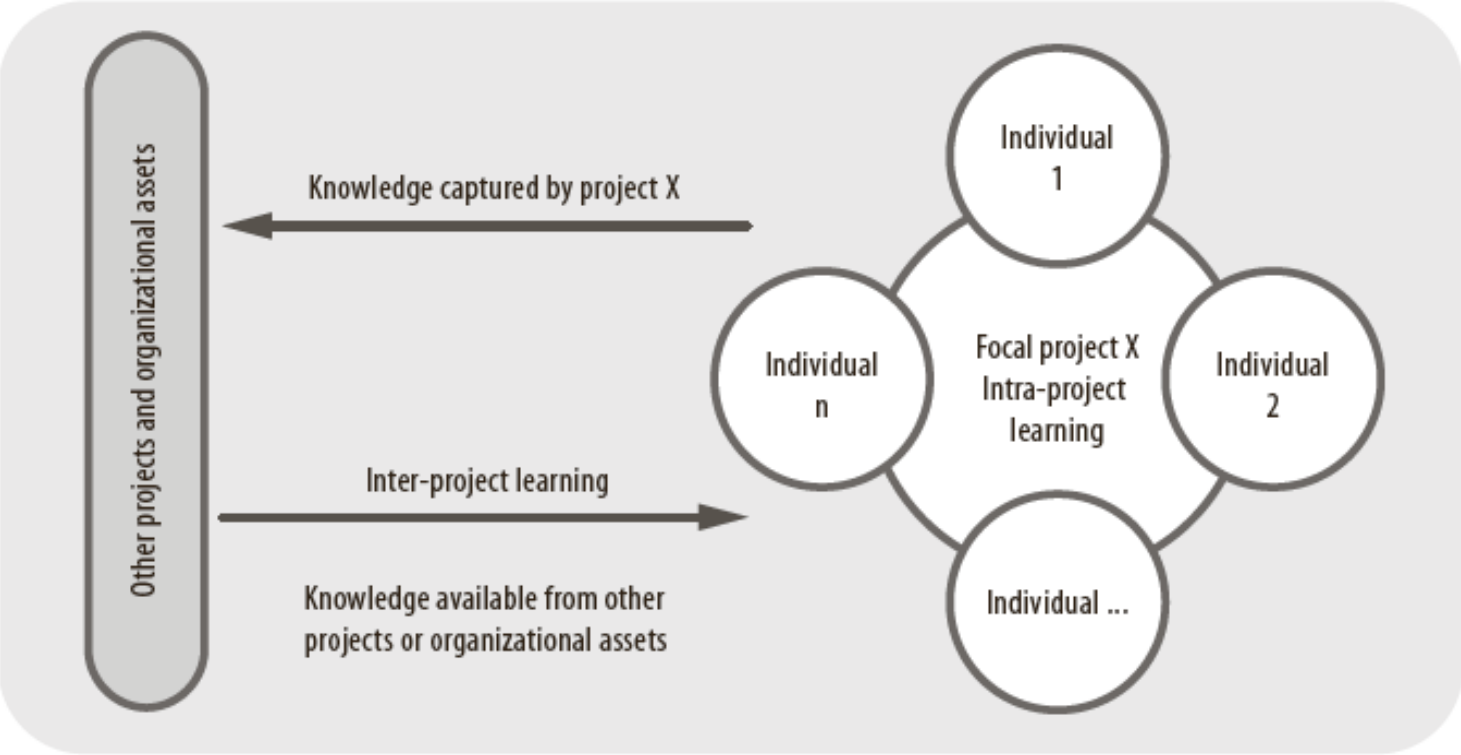
- Project execution model, is not made for learning
  - For example; schedule pressure, focus on delivery, ….
  - Many individuals, units and even sub-cultures
    - Each with their own **mental model** of what works and what does not work.
    - Therefore, integration of knowledge is *demanding*
  - Project teams lives in splendid isolation due to autonomous nature of projects.
- What is needed in order to break the isolation, use time on knowledge sharing, connect and integrate individuals' knowledge base for the common benefit?
  - **We need a broad recognition that meeting performance goals requires attention to learning practices. what to do to enforce this recognition?**

Why it is complicated?

- Project nature: (every project is an island) **duration**, comprise a mix of people/organizational units, have unique goals, carried out within certain limits and specific context.
  - **How to ensure relevance of experience** to other projects?
  - Availability of knowledge (cross organizational, temporary, use of consultants)
  - Lots of tacit procedural knowledge
  - Knowledge utility undergoes several transformations on its journey from the sender to the receiver
    - The sender: experimenting, reflect/think/discuss/confront, write/rewrite
    - The receiver: read-listen / discuses / adapt/ replicate

Encapsulating the problems

Figure 5 Framework of the study: Inter and Intra-project learning

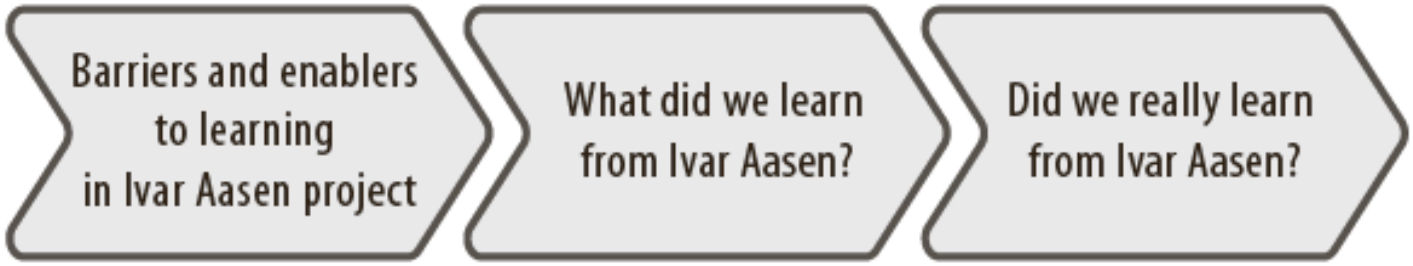


Learning within projects (intra-project learning)
Learning between projects (inter-project learning)

Case study

- The Ivar Aasen project is a NOK 28 billion oilfield development project that was successfully completed on December 2016. The project was structurally complex, with over 120 suppliers and vendors, and in total more than 5000 people contributed to the project.
- Ivar Aasen project is characterized by:
  - Fresh operator organization / (blank sheet organization)
  - Organizational success was dependent on project success
  - Continuous changes
  - Extreme time pressure,
  - Multiplicity of stakeholders
  - Tremendous financial impact
  - Market uncertainty
- These characteristics render the project particularly interesting for study purposes and as a source of insights.

Study stages



Attitudes and means to connect and integrate knoweldge within projects. Intra-project learning

Ensuring the relevance of the knoweldge to other projects. Collecting The knoweldge utilities (lessons-learned). (Inter-project learning)

What is the impact of the knoweldge utlities?

Checking the applicability and reuse of the lessons learned (organizational learning)

Stage 1

- Identification and elaboration of the means and attitudes needed to enable learning (connect and integrate knowledge) in complex and demanding project environment.

Findings

Connecting and integrating individual's knowledge requires far more attention to **attitudes** than a focus on establishing more procedures, routines, reports, project review sessions, systems or building knowledge repositories.

Findings Attitudes

- Encourage team members to recognize interdependency between their tasks
- Encourage team members to recognize their own limitations
- Encourage individuals and teams to seek and ask for help
- Encourage individuals to be open and receptive to new ideas and new concepts
- Encourage individuals to engage in discussions (constructive confrontations)
- Encourage individuals to challenge the established truths, norms and the rules

Findings (Contextual conditions)

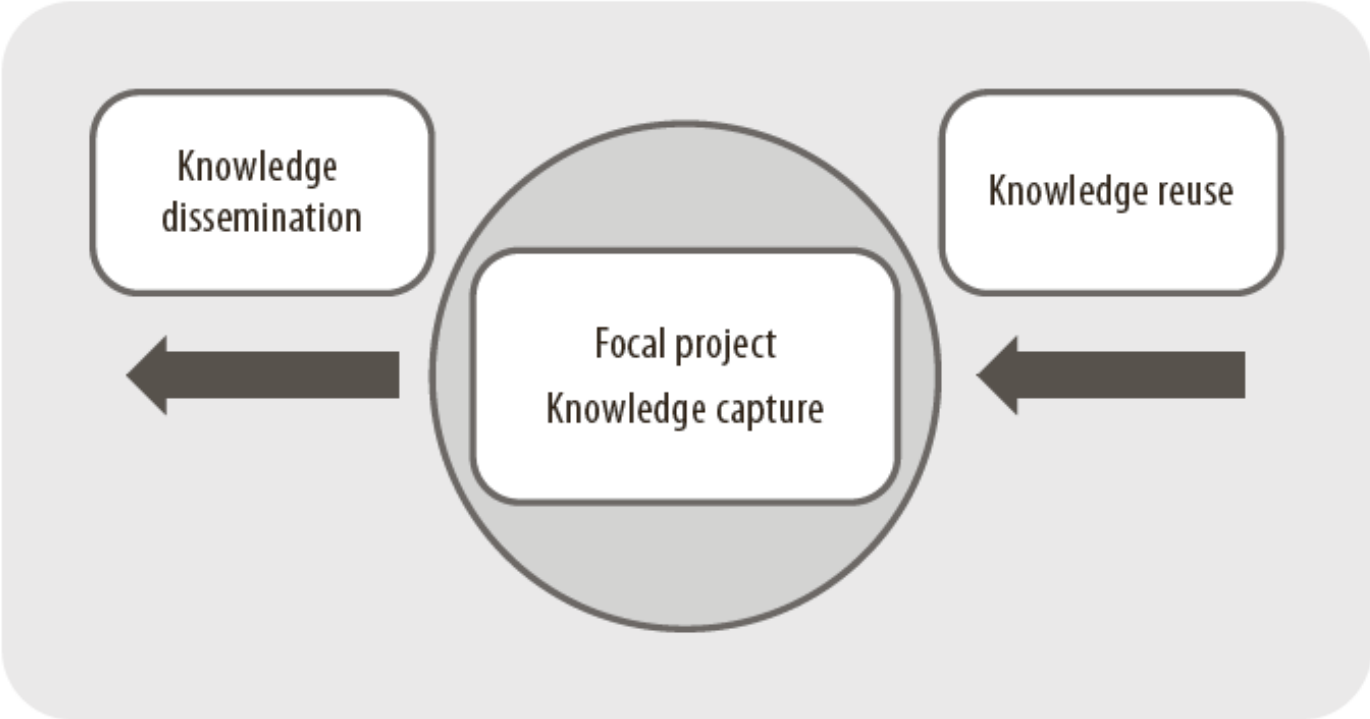
- Eagerness to learn and share
- Psychological safety ensured
- Provision formal opportunities for learning for individuals
- Established inclusive work environment
- Error tolerance
- Pool of highly experienced individuals
- Physical proximity and co-location of project teams.

Findings cont.

- Improving performance of the focal project depends on the project management ability to integrate and connect indviduals's knoweldge base.

- Improved performance contribute to more apperciassjon to the role of learning in projects

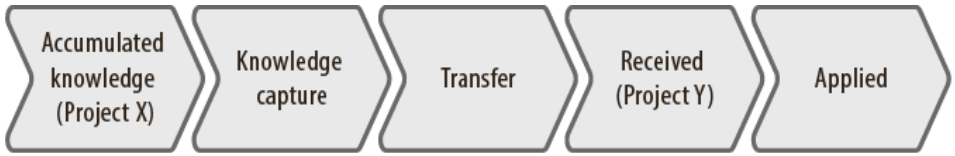
Stage 2. Inter-project learning



Inter-project learning is about making the knowledge gained from the focal project available for the next project and reusing the available knowledge in the organization and other projects

Views on inter-project learning

- Cognitive view
  - The sender- receiver approach



  - Knowledge undergoes several transformations on its journey from the sender to the receiver
    - The sender: experimenting, reflect/think/discuss/confront, write/rewrite
    - The receiver: read-listen / discuses / adapt/ replicate
- Constructivist view
  - Getting the sender and the receiver to sit together, engage, discuss and reflect together
  - Moving individuals between projects
  - Job-rotations

Inter-project learning

- **While intra project learning requires practices and attitudes that enable individuals to connect and integrate their knowledge**
- By contrast, inter-project learning requires learning practices and attitudes that support capture, dissemination and the reuse of the knowledge to improve the project performance and to avoid repetition of earlier mistakes.
  - The relevance of knowledge

Stage 2:

- Based on post-project review
- Ensuring the relevance of the knowledge to other projects.
- Collecting The knowledge utilities (lessons-learned). (Inter-project learning)
- 28 individuals contributed to stage 2
- Enormous data material

Ensuring the relevance: Contingent approach

- The general approach adopted in the longitudinal study was to associate the lessons learned with the underlying characteristics of the Ivar Aasen project and its context.
- The idea is to help future project managers to assess themselves the relevance of each lessons-learned to their own situation
- Conceptually, the findings from the study should be considered as a proof of concept: applying the contingent approach to capture lessons learned from post-project reviews could improve the reuse of the lessons learned in future projects.

Collecting lessons-learned

- Project characteristics
  - The Ivar Aasen project was carried out under time pressure and market uncertainty
  - The Ivar Aasen project had significant impact on the operator company
  - Organizationally complex project
- 22 lessons are identified

Stage 3: Did we really learn?

- Assessing the impact of the lessons-learned on individuals, teams and the organization?
- Checking the applicability and reuse of the lessons learned (organizational learning)

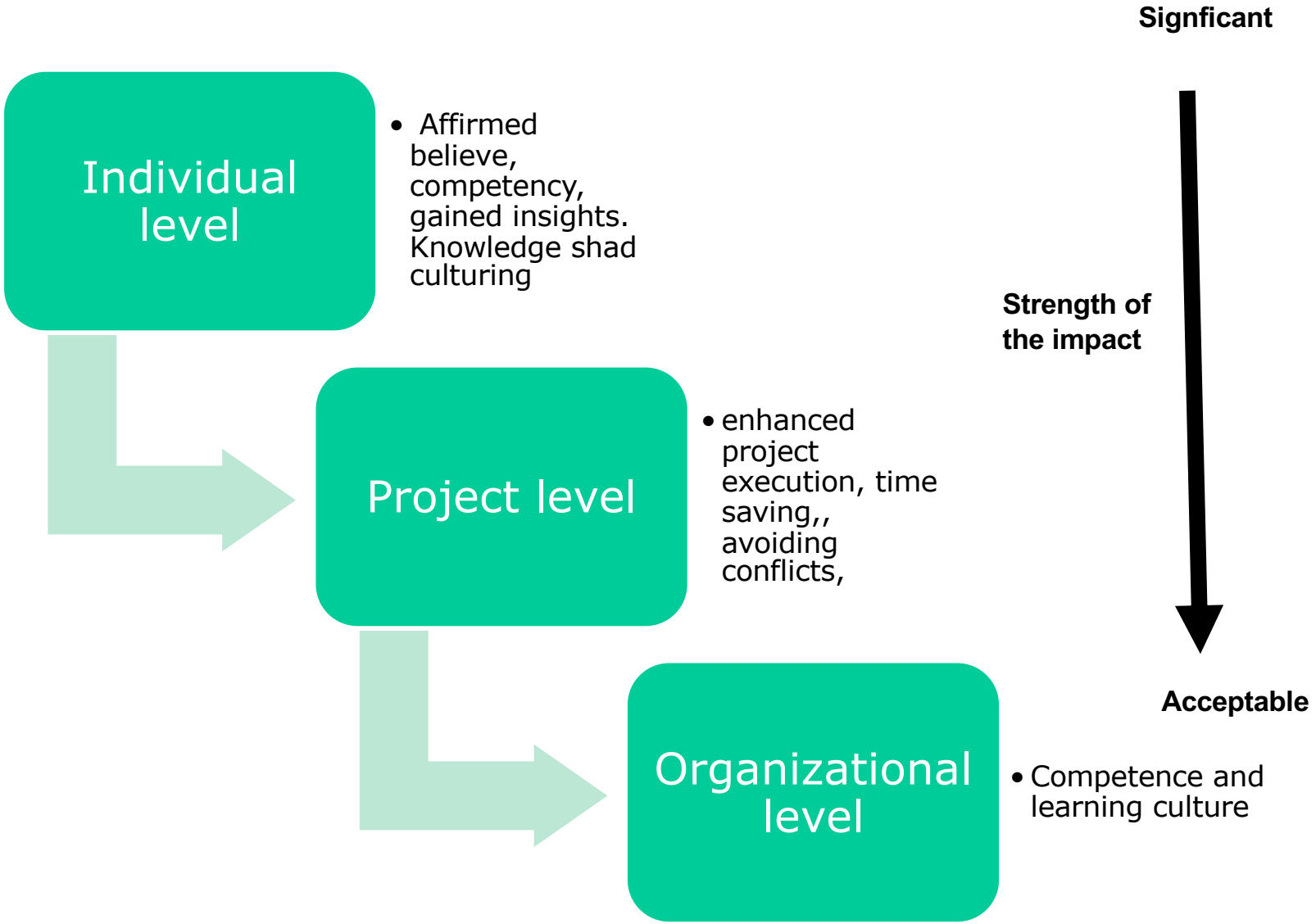
Table 10 Postulates to assess the impact of learning

Postulates	Objective
Helped me/my team to save time	Assess the impact at the project level
Helped me/my team to avoid conflicts or misunderstandings with various stakeholders	Assess the impact at the project level
Helped me to gain valuable insights into the conditions of success in my current project	Assess the impact at the project level
My competency as a project manager/team member has increased	Assess the impact at the individual level
Project competency within my team/unit has increased	Assess the impact at the team level
Project competency within Aker BP has increased	Assess the impact at the organizational level
Has contributed to a better lessons-learned culture in Aker BP	Assess the impact at the organizational level
We are now doing projects differently because of the lessons learned from the Ivar Aasen project	Assess the impact at the project level
Has strengthened my belief that our team/my unit will succeed in our task/assignment	Assess the impact at the team/individual level
Has inspired me/my team to appreciate collaboration and knowledge sharing	Assess the impact at the team/individual level

Table 12 Ranking of the impact of the lessons learned

Rank		T-value	p-value
1	Has inspired me/my team to appreciate collaboration and knowledge sharing	5.1	.000
2	My competency as a project manager/ team member has increased	4.9	.000
3	Helped me to gain valuable insights into conditions of success in my projects	4.5	.000
4	Has strengthened my belief that my team will succeed in our task/assignment	4.5	.000
5	Project competency within my team/unit has increased	3.8	.002
6	Project competency within Aker BP has increased	3.6	.003
7	We are now doing projects differently because of the lessons learned from the Ivar Aasen project	2.9	.012
8	Helped me/my team to avoid potential conflicts/ misunderstandings with various stakeholders	2.9	.012
9	Helped me/my team to save time	2.4	.033
10	Has contributed to a better lessons-learned culture in Aker BP	2.1	.054

Impact


Signficant
Individual level
• Affirmed believe, competency, gained insights. Knowledge shad culturing
Strength of the impact
Project level
• enhanced project execution, time saving,, avoiding conflicts,
Acceptable
Organizational level
• Competence and learning culture

conclusions

The overall conclusions suggest that lessons learned from the Ivar Aasen project contributed to strong impact on the following issues:

- Recognition of the advantages of collaboration and knowledge sharing
- Increased project competency at the individual level and team level
- Provided valuable insights into the conditions of success in complex projects
- Strengthen believe in success

Re-use of lessons learned

Table 13 Applicable and followed-through lessons learned from the Ivar Aasen project

Lessons learned	Support	
	Applicable and followed through	Applicable but not followed through
Efforts should be made so that the contractors/suppliers understand their importance to the project.	76.47%	5.88%
The project organization should have the ability to change and learn from its errors along the way.	76.47%	17.65%
A culture should be created in which project team members are encouraged to improve their tasks continually.	76.47%	11.76%
Relationships between the operator, suppliers and subcontractors should be based on mutual trust, not just on formal agreements.	70.59%	11.76%
The project's frameworks, roles, responsibilities, expectations, and priorities should be communicated to all stakeholders.	70.59%	23.53%
The suppliers should be given a real opportunity to influence the project development in a positive way.	64.71%	23.53%
It is important to keep to the original schedule/deadlines and use that as a means to create a sense of unity and a driving force.	64.71%	17.65%
Maintain an adequate flow of information between all subprojects/deliverables in all phases.	58.82%	23.53%
All subprojects/deliverables should be staffed with skilled and experienced people in all relevant aspects.	58.82%	23.53%
Stronger focus should be placed on front-end engineering design (FEED) processes.	52.94%	23.53%
Stronger emphasizes should be placed on being transparent about challenges and problems encountered.	52.94%	35.29%
Top management should be visible.	52.94%	35.29%
Mobilize and provide support to the most important parts of the project that are necessary for success.	52.94%	35.29%
Project plans should be based on realistic assumptions about project development, continuity, and the ability of the suppliers.	47.06%	35.29%
Autonomy should be provided at all levels.	41.18%	35.29%

Table 14 Applicable but not followed through lessons learned from the Ivar Aasen project

Lessons learned	Support	
	Applicable and followed through	Applicable but not followed through
Autonomy should be balanced with feedback, follow-up and visibility	35.29%	47.06%
Work more consciously towards achieving intermediate results (turning points) in the project in order to create self-esteem and a driving force	35.29%	35.29%
Maintain and strengthen awareness of the impact of the project on the entire organization	35.29%	52.94%
Suppliers/contractors should have compatible information systems for the sharing of important data during different project phases	23.53%	47.06%

Managerial challenges

- Findings suggest that the following lessons learned from the Ivar Aasen project might need stronger emphasis:
  - Stronger emphasizes should be placed on being transparent about challenges and problems encountered.
  - Top management should be visible able to mobilize and provide support to the most important parts of the project that are necessary for success.
  - Project plans should be based on realistic assumptions about project development, continuity, and the ability of the suppliers.
  - Autonomy should be provided at all levels.

Final conclusions

- Learning
  - Individuals, teams, top management should be provided with various types of meeting spaces, project review sessions or informal learning environments,
  - The forums should provide opportunities for individuals to explain openly why sometimes things have gone wrong or right, not just what can go wrong or right
  - The meetings places should be arranged across projects on regular basis in order to encourage and emphasize the importance of sharing knowledge

Reccomendations cont.

- Competence development programmes should include sessions on lessons learned from previous projects,
- Connecting and integrating individual's knowledge requires far more attention to **attitudes** than a focus on establishing more procedures, routines, reports, project review sessions, systems or building knowledge repositories.