Lean Research:

Action Learning for Lean Leaders

Prof. Dr. Daryl Powell
University of South-Eastern Norway

1



Source(s): Extrapolated from Åhlström *et al.*, 2021

Is Lean a Theory?

SINTEF

2

2026 Lean Summit

Session objectives

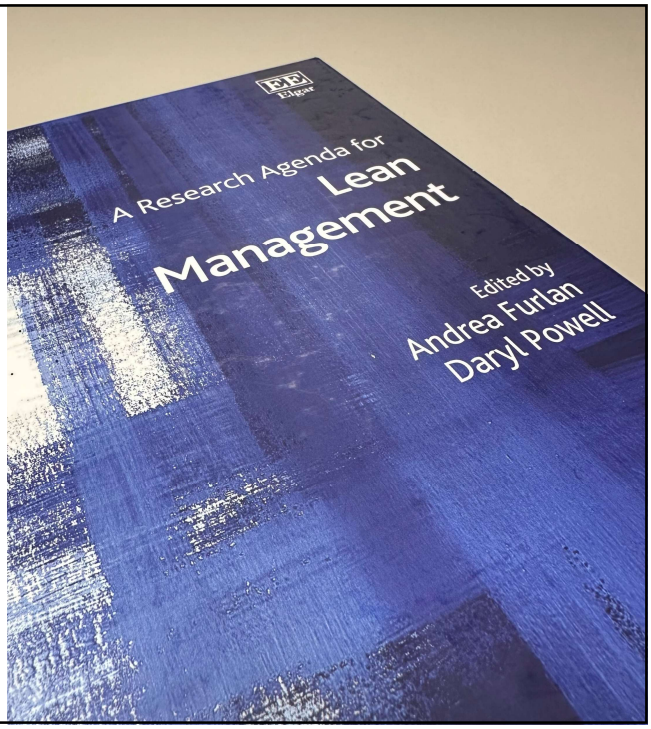
By the end of this session, participants will be able to:

- Identify key principles of Action Learning and understand how they support Lean Transformation.
- Describe how Action Learning and Lean Thinking work together to build organizational capability.
- Recognize the role of structured questioning and group reflection in developing problem-solving skills.

3

Lean Research

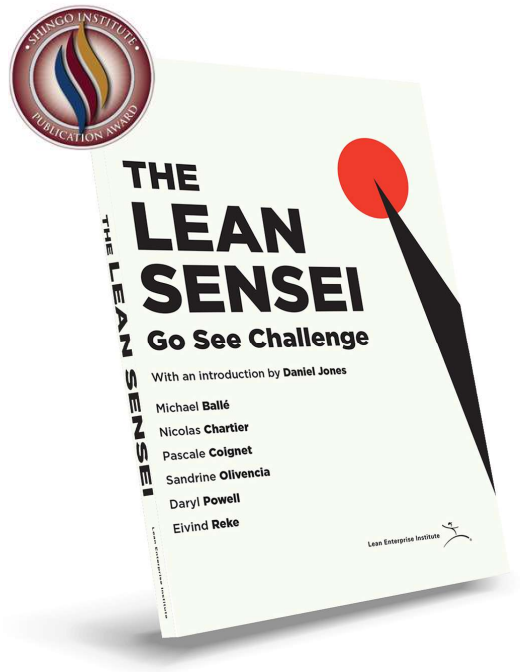
- From bundles of practices to business strategy
- Lean leadership and behaviours
- Lean and learning
- Lean and sustainability
- Lean and digitalization



USN Universitetet i Sørøst-Norge

4

2026 Lean Summit



"Learning is at the heart of lean. Indeed, lean is more accurately described as an education system rather than a production system".

5

"Our greatest challenge is to improve quality…"

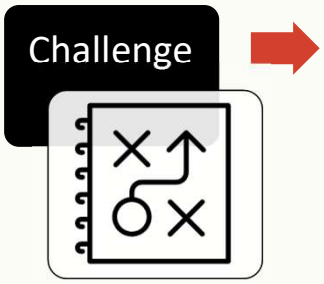


TOYOTA

6

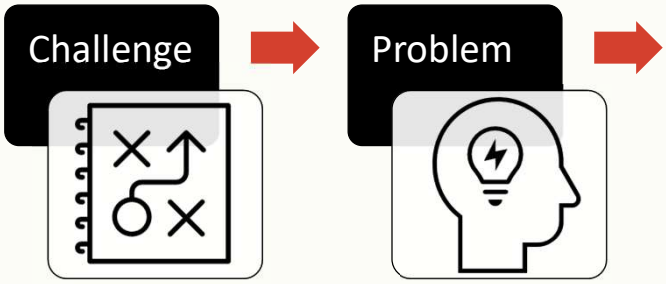
2026 Lean Summit

The Lean Strategy



7

The Lean Strategy



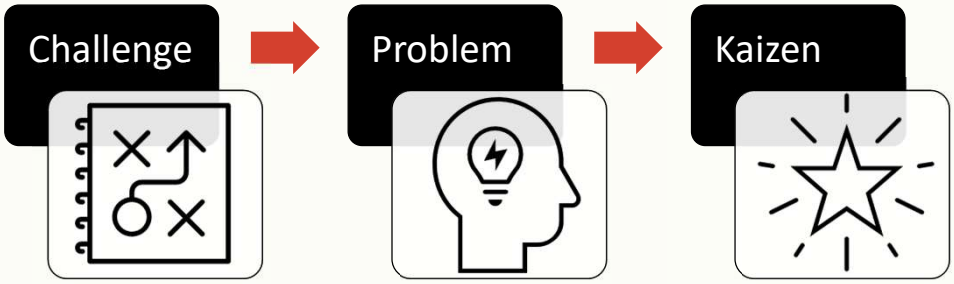
8

2026 Lean Summit



9

The Lean Strategy



10

2026 Lean Summit

The Lean Pivot

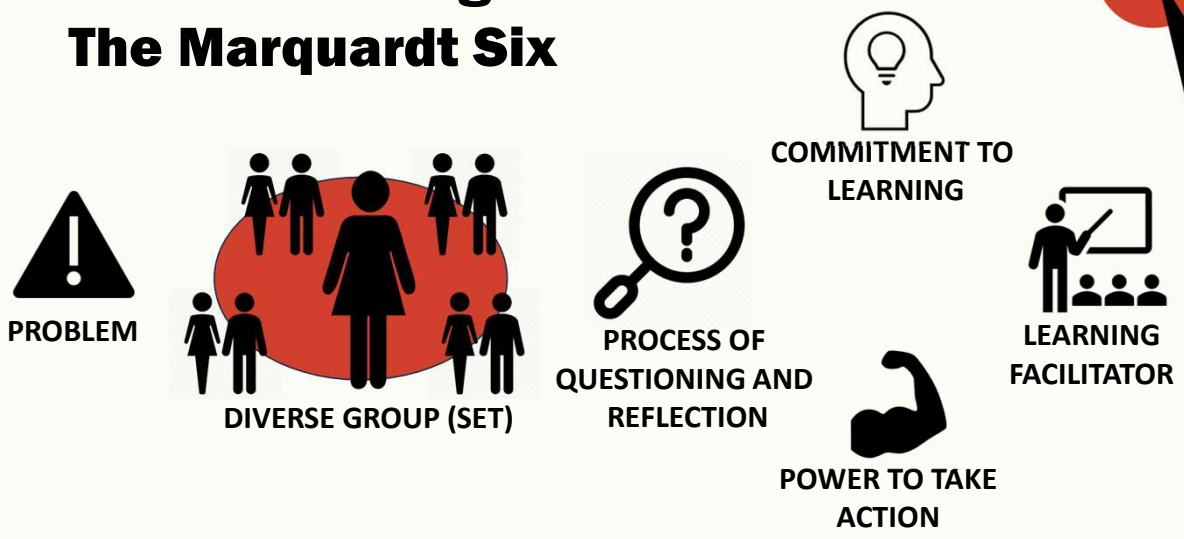
Impose
SOLUTIONS

Versus

Understand
PROBLEMS

11

Action Learning: The Marquardt Six



12

2026 Lean Summit

Action Learning

$$L = P + Q$$

13

LEARNING FROM THREE LEAN TRANSFORMATION CASES



Insights into successful business process improvement

14



CASE 1: WHAT HAPPENS WITHOUT ACTION LEARNING

Consultant-Driven Approach

External experts directed activities, focusing on tools rather than facilitating learning and empowerment.

Lack of Leadership Engagement

Leaders were disengaged and failed to model facilitative behaviors necessary for Lean success.

Absence of Inquiry and Reflection

Without questioning and group reflection, Lean was treated as a transactional installation project.

Outcome: Low Ownership and Sustainability

Lean efforts failed to build culture or sustain improvements after consultants left.

CASE 2: NETWORK ACTION LEARNING AT KONGSBERG MARITIME



Collaborative Lean Transformation

NAL engaged focal company and suppliers in shared learning to improve Lean practices collaboratively.

Revans' Learning Formula

The approach applied L = P + Q + O + IO, emphasizing knowledge, questioning, and inter-organizational insight.

Addressing Supply Chain Challenges

Real problems like lead time variability, on-time delivery and quality issues were solved collaboratively through inquiry and reflection.

Building Resilience and Adaptability

NAL transformed Lean into a cognitive process fostering systemic improvement, resilience, and adaptability.

2026 Lean Summit

CASE 3: VELUX LEARNING-TO-LEARN CAPABILITY



Action Learning Program

VELUX implemented a 12-week Action Learning program to integrate Lean and Industry 4.0 adoption among senior leaders.

Systems Alpha, Beta, Gamma

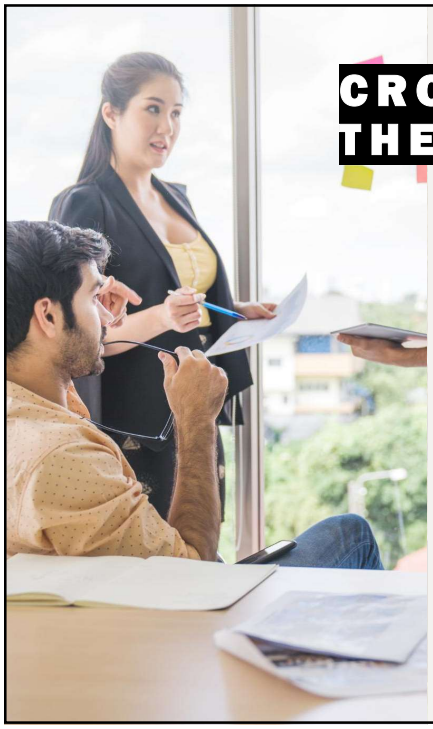
The program applied Revans' Systems Alpha, Beta, and Gamma to address real operational challenges through inquiry and reflection.

Leadership Behavior Shift

Leaders transitioned from directive roles to facilitative ones, promoting questioning and deep reflection in daily routines.

Sustainable Transformation

The case shows sustainable change needs leadership development and organizational learning beyond technical skills.



CROSS-CASE INSIGHTS: WHAT THE THREE CASES REVEAL

Lean as a Learning System

Lean succeeds when adopted as a learning system, not just a set of isolated tools.

Leaders as Facilitators

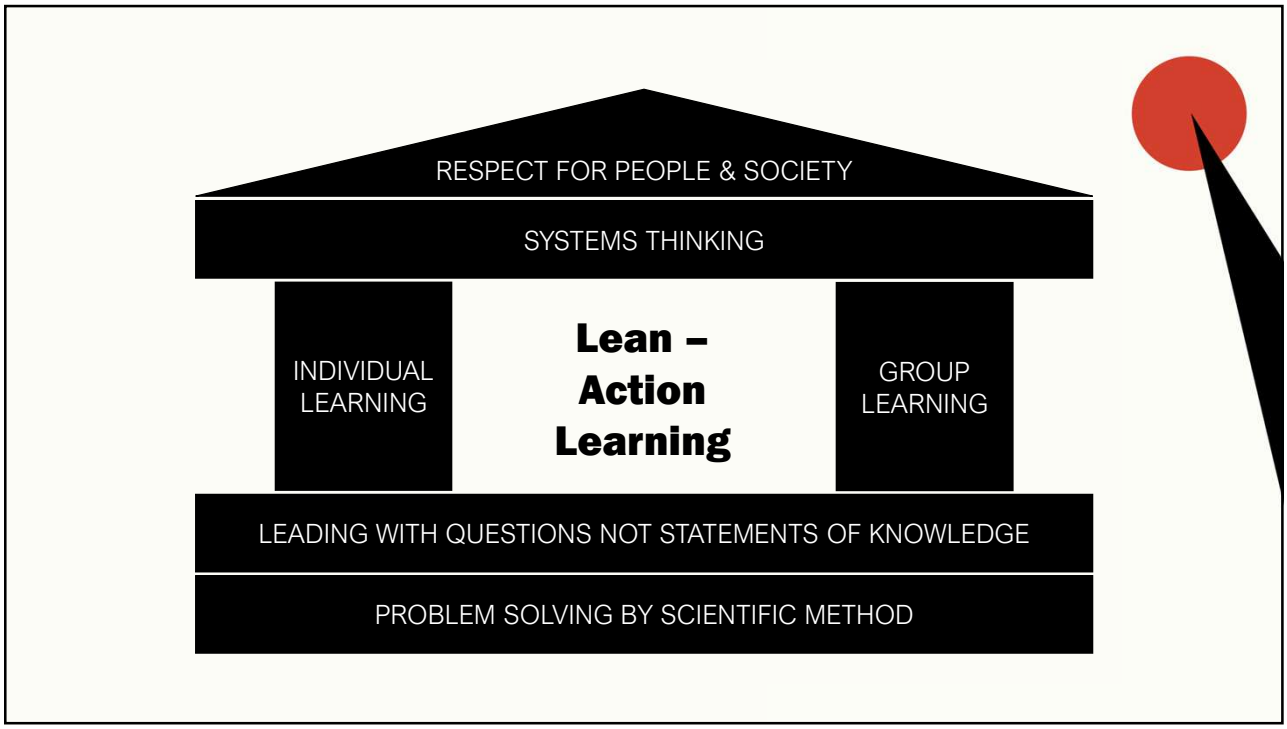
Leaders - when engaged as learning facilitators – drive successful Lean transformation and behavioral change.

Systems Thinking and Reflection

Organizations embracing systems thinking with reflection and experimentation are capable of building resilience and adaptability.

Social and Cognitive Process

Lean transformation requires structured learning cycles, psychological safety, and leadership commitment.


RESPECT FOR PEOPLE & SOCIETY
SYSTEMS THINKING
INDIVIDUAL LEARNING
Lean – Action Learning
GROUP LEARNING
LEADING WITH QUESTIONS NOT STATEMENTS OF KNOWLEDGE
PROBLEM SOLVING BY SCIENTIFIC METHOD

19


Reflexive Exercise: Reframing Lean Failures Through Action Learning
Transforming setbacks into opportunities for growth

20



Step 1 – Choose a Real Lean Failure

Importance of Individual Reflection

Participants reflect individually on real Lean failures to build authentic learning foundations without judgment.

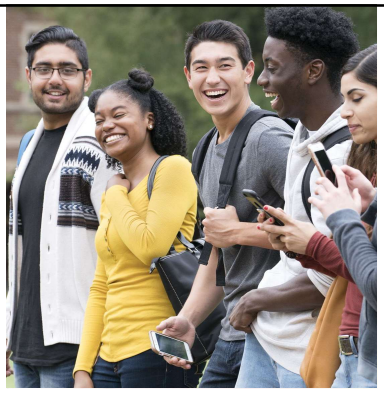
Emphasize Psychological Safety

Maintaining psychological safety is critical so participants feel safe to reflect honestly without sharing details prematurely.

Learn From Failure

Failures are valuable learning opportunities highlighting systemic issues like unclear goals and leadership challenges.

21



Step 2 – Share Your Story in Groups

Group Story Sharing

Participants share their Lean failure stories in small groups using a structured and time-limited approach to encourage concise storytelling.

Ground Rules for Sharing

Facilitators emphasize no judging, no interrupting, no advice, and no problem -solving during sharing to create a safe space.

Building Trust and Empathy

This step fosters trust and empathy among participants, enabling them to understand common challenges and assumptions in Lean projects.

Focus on Reflection, Not Solutions

The emphasis is on listening and reflection, preventing early problem-solving to deepen learning through questions and shared experiences.

22



Step 3 – Action Learning Questioning

Structured Questioning Process

Groups ask only questions for two minutes per storyteller, focusing on learning rather than fixing problems.

Five Question Categories

Questions include framing, assumptions, stakeholders, learning processes, and behavior to uncover deeper insights.

Encouraging Critical Reflection

The questioning encourages critical thinking about underlying systemic issues rather than focusing on superficial symptoms.

Essence of Action Learning

Disciplined questioning leads groups to learn through inquiry and reflection, not directive problem-solving.

23

Step 4 – Reframe Your Failure

Articulating New Insights

Participants summarize new insights gained and reinterpret failures through thoughtful reflection and questioning.

Applying Action Learning Principles

Use inquiry-first leadership and learning formulas to approach problems with fresh perspectives.

Embracing Iterative Learning

Value small experiments to avoid costly mistakes, fostering continuous learning and adaptation.

Transforming Failure into Growth

Reframing failure as a catalyst for growth encourages reflection and actionable future improvements.



24



Step 5 – Group Pattern Spotting

Collective Reflection on Failures

Group members identify recurring patterns to reveal systemic issues beyond individual projects.

Discuss Recurring Themes

Participants explore repeated failures like unclear purpose and lack of stakeholder involvement.

Foster Shared Responsibility

Surfacing patterns cultivates collective learning and shared accountability within the group.

Capture Insights for Improvement

Document patterns on flip charts or digital boards for future strategy development.



Step 6 – Final Reflection

Individual Reflection Importance

Reflect individually to identify one change to try on Monday!

Behavioral Change Commitment

Committing to a specific behavioral change translates learning into practical future actions.

Role of Action Learning

Action Learning drives Lean success through questioning, reflection, and collaborative learning.

Facilitator's Role

Find yourself a sensei!

2026 Lean Summit