You Can't Plan Complex Projects, So Control Them

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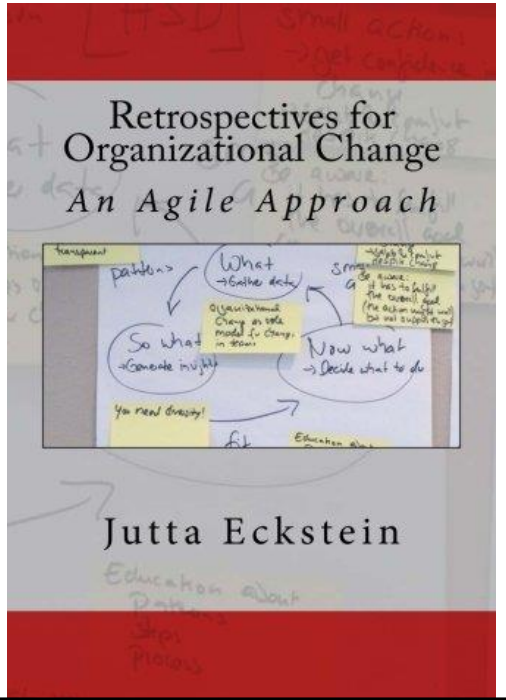

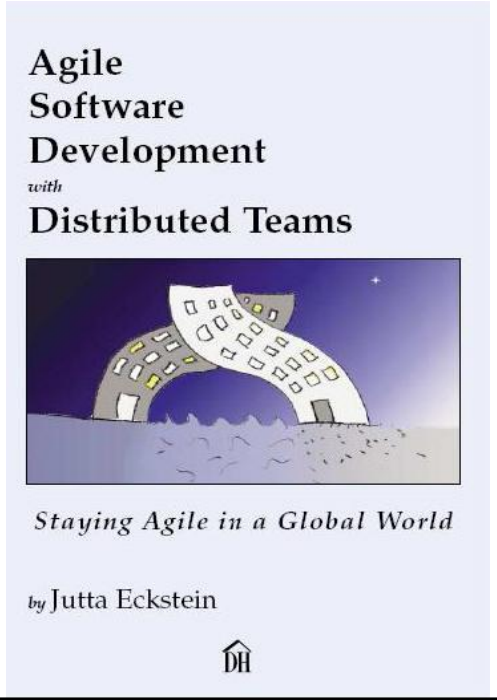

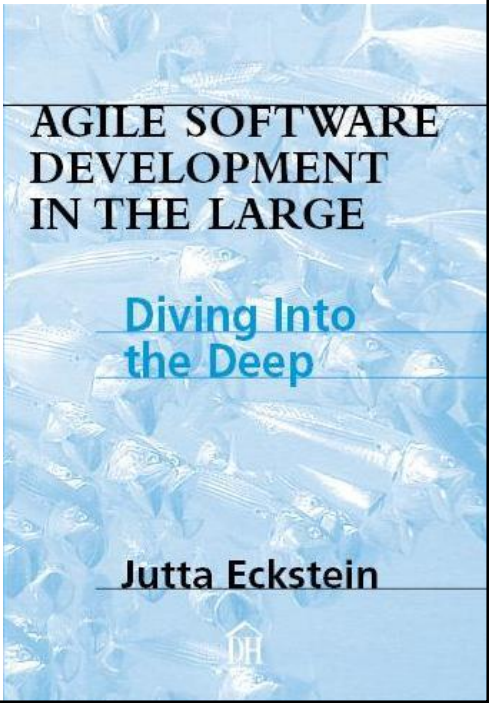

Goal for the Session

A new way of thinking about:

Planning and Controlling

in Complex Projects

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Agenda

- Defining the context
- Findings about predictions
- Learnings from Beyond Budgeting
- Application to Planning and Controlling

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Defining the Context

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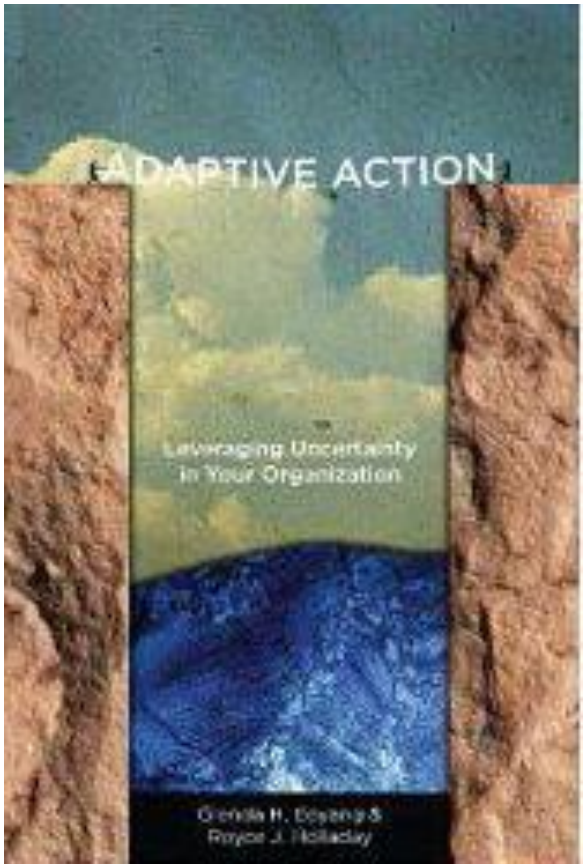
Defining Complex Projects

- **From Human System Dynamics – Three Kinds of Change**
  - Static
  - Dynamic
  - Complex (aka dynamical)



- Glenda Eoyang & Royce Holladay: Adaptive Action
- http://www.hsdinstitute.org and
- http://wiki.hsdinstitute.org/3_kinds_of_change

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Findings about Predictions

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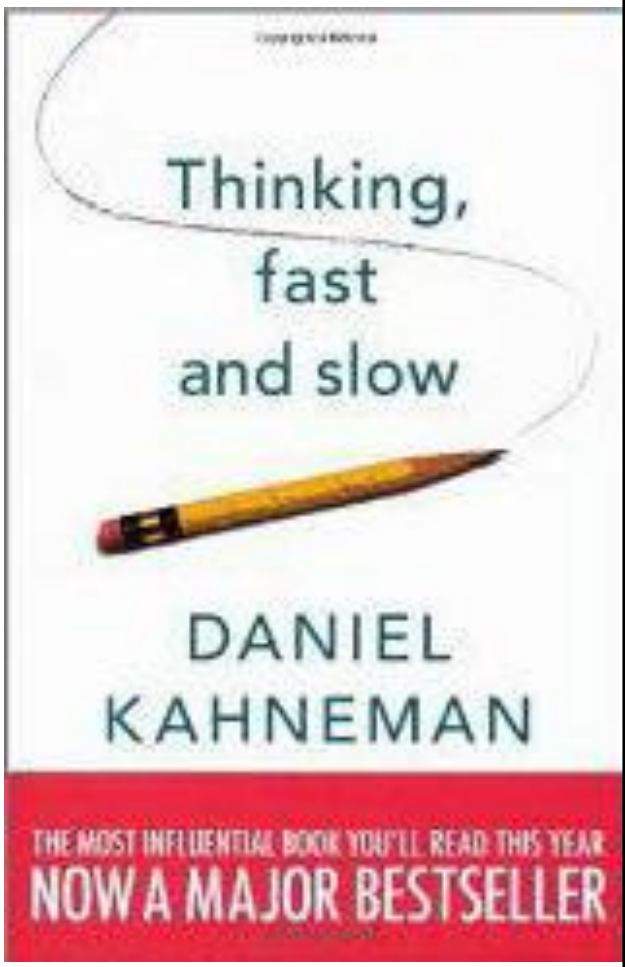
Prediction is Impossible

- **Daniel Kahneman, psychologist, nobel prize winner in economics:**

  – A lot depends on coincidence:

  "*There was a 50:50 chance that the embryo that became Hitler could have been female.*"



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Philip Tetlock, Psychologist, University of PA

- **Collected >80,000 political & economical predictions**
- **Predictions were worse than equal distribution**
- **When proved wrong:**
  - excuses, reasons why they believe they were right but the timing wrong etc.

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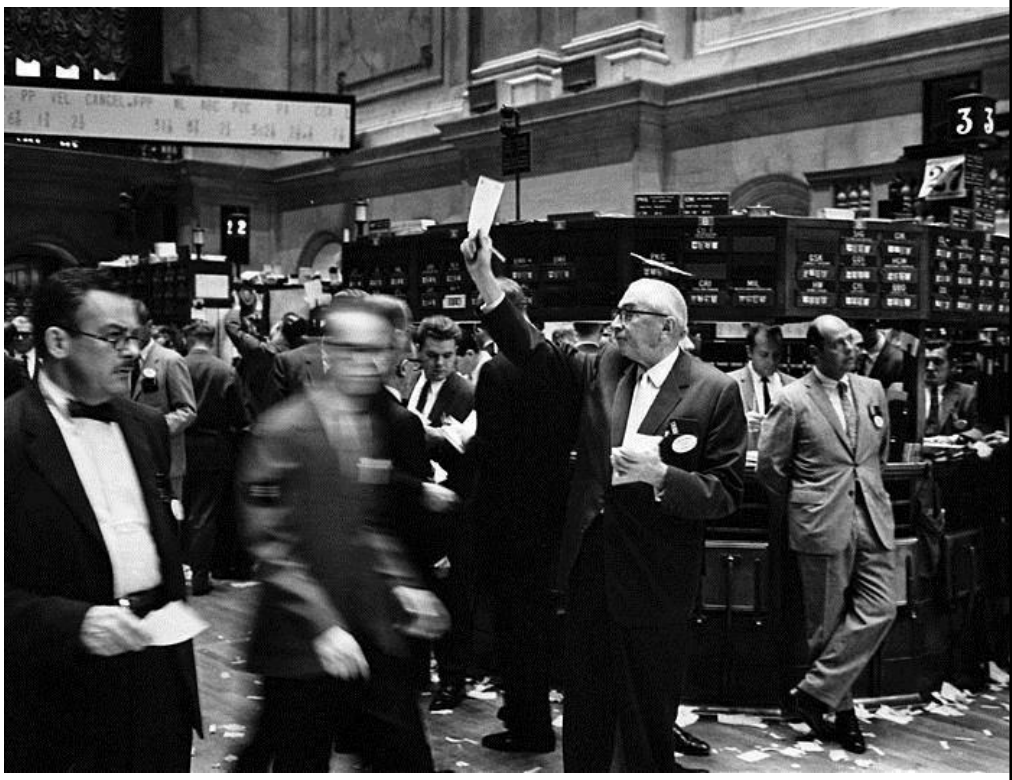
Terry Odeon, Finance Professor at UC Berkeley

- Analyzed ca. 10,000 broker results consisting of ca. 163,000 trades
- On average stocks sold did 3.2% better / year than the ones bought
- Result was reconfirmed by two other studies



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Daniel Kahneman serving Israel Army

- Evaluated and recommended candidates for officer career
- Feedback every few months with commander
- Evaluation was a bit better than blind guess
- High confidence says you have a coherent story not that the story is true!

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Lessons on Predictions

- **Errors of prediction are inevitable because the world is unpredictable.**
- **High subjective confidence is not an indicator of accuracy**
  - Expert status doesn't make a difference
  - Intuition can only be trusted in stable environment
- **Short-term trends can be predicted based on previous behaviors and achievements**

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Learnings from Beyond Budgeting

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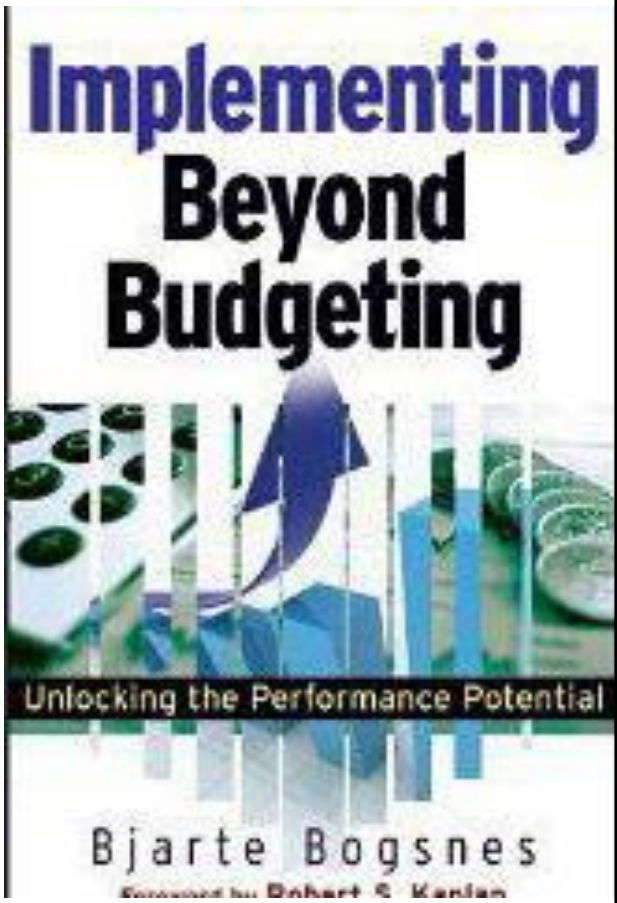
Beyond Budgeting

- **Developed by CFOs**
- **Caused by two-fold experiences**
  - Request for too much money
  - Request for not enough money
- **Developed several principles and recommendations**



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Recommendation from Beyond Budgeting

- **If things are stable and you believe tomorrow will be like today, why should you spend time on forecasting?**
  - You know what tomorrow will look like.
- **If times are turbulent and you have no idea what tomorrow will be like, how could you spend time on forecasting?**
  - You are most likely wrong anyway

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Beyond Budgeting – Principle

- **Good target has to be ambitious**
- **Forecast / estimation is for closing gap to goal**
- **Forcing a target and a forecast into one number is almost guaranteed to result in:**
  - either a bad target or
  - a bad forecast

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Beyond Budgeting - Recommendation

- **Budgets need to be more flexible**
  - Rolling budget
  - Event-based budget

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Application

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Note: This is NOT recommended

- **Typical Approach in IT**
  - Idea / request for project or product development
  - Request for a cost or/and effort estimation
  - Go / No Go decision
- **Many findings ignored**
  - Target and estimation forced into one number
  - Relying on experts only
  - Fixing budget upfront

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Use Value instead of Estimates

- **Value is defined by**
  - ROI and savings
  - Risks
  - Importance
  - Cost of delay
  - Willingness for investment

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Different Planning Levels

- **Roadmap – Long-term**
  - Themes only
- **Release – Mid-term**
  - Features based on value and velocity
- **Iteration – Short-term**
  - Stories based on value (maybe plus estimate) and velocity

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Controlling: Rolling or Event-Based

- **Check value and progress regularly**
- **Progress is evaluated by:**
  - Delivery of working features
  - Amount of work in progress (less is more)
  - Impediments preventing better performance

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Application to Controlling

- **Value and progress define**
  - Prioritization
  - Cut-Off
- **Adjust according to lessons learned from market and development**
- **Short-term lessons feed back into all plans**
  - E.g. yesterday's weather

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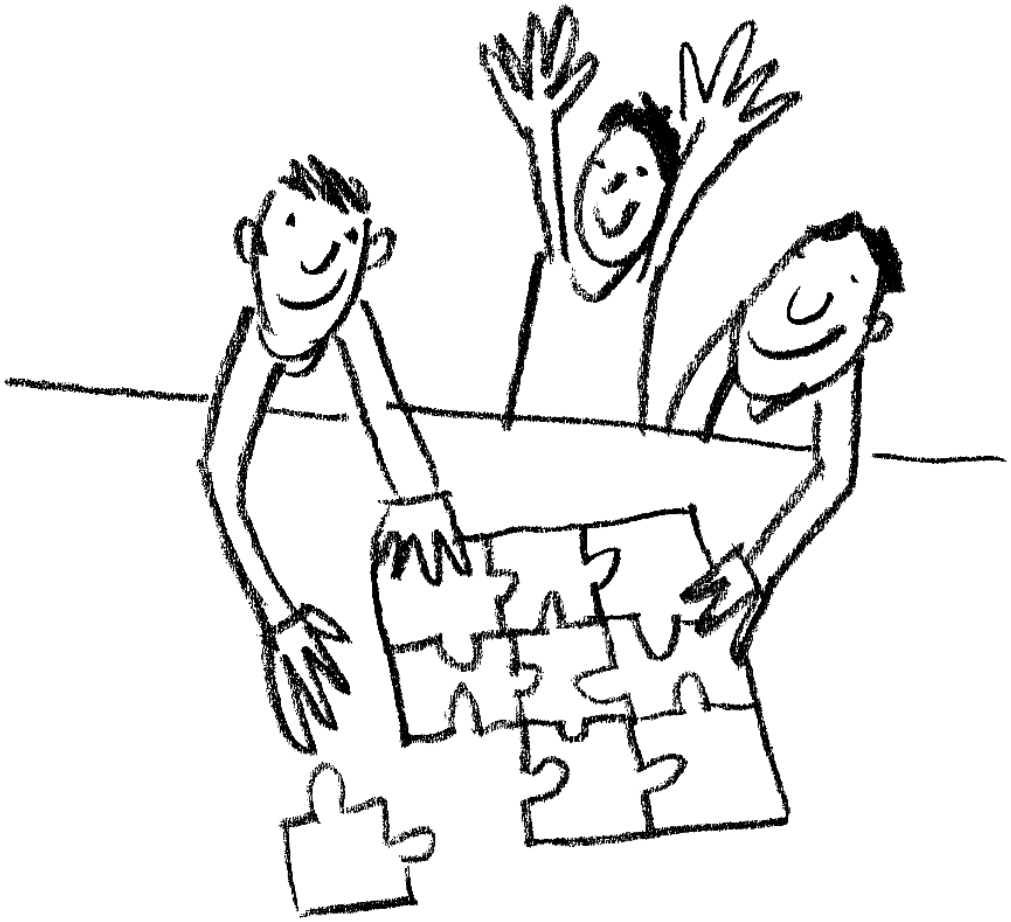
General

- Rely on diverse teams instead of sole experts
- Ensure information travels across roles and hierarchies
- Establish planning and controlling as shared responsibilities



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Keys to Planning and Controlling

- Separate estimating from planning
- Check value and progress regularly
- Use rolling or event based controlling and forecasting
- Use yesterday‘s weather for short-term plan
- Enable groups with high diversity
- Accurate forecasts aren‘t possible because the world is unpredictable

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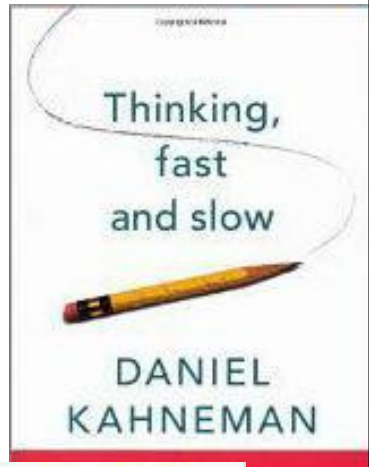
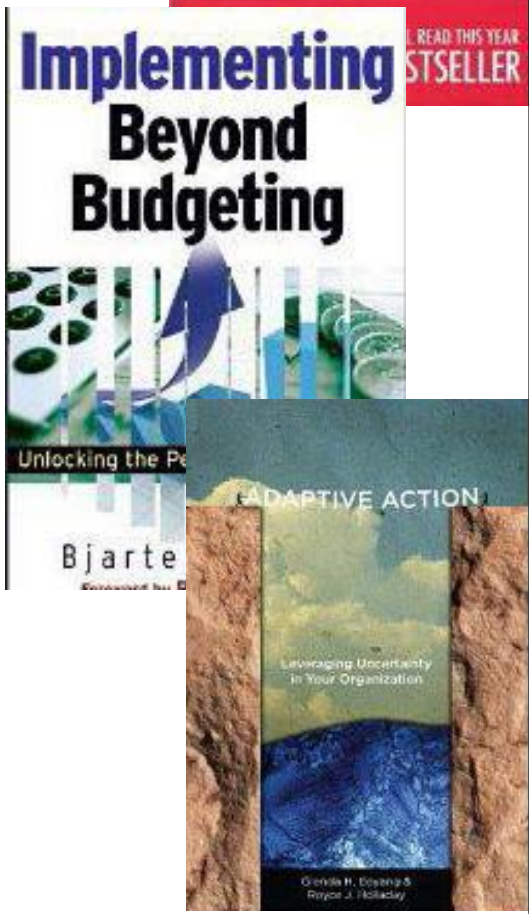
Sources

- **Daniel Kahneman, Thinking Fast and Slow**
- **Bjarte Bogsnes, Implementing Beyond Budgeting**
  - Beyond Budgeting‘s home page: http://bbrt.org
- **Human System Dynamics:**
  - Glenda Eoyang, Royce Holladay: Adaptive Action
  - http://www.hsdinstitute.org and
  - http://wiki.hsdinstitute.org/3_kinds_of_change
- **Article on InfoQ:**
  - http://tinyurl.com/complexProjects





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Many Thanks!

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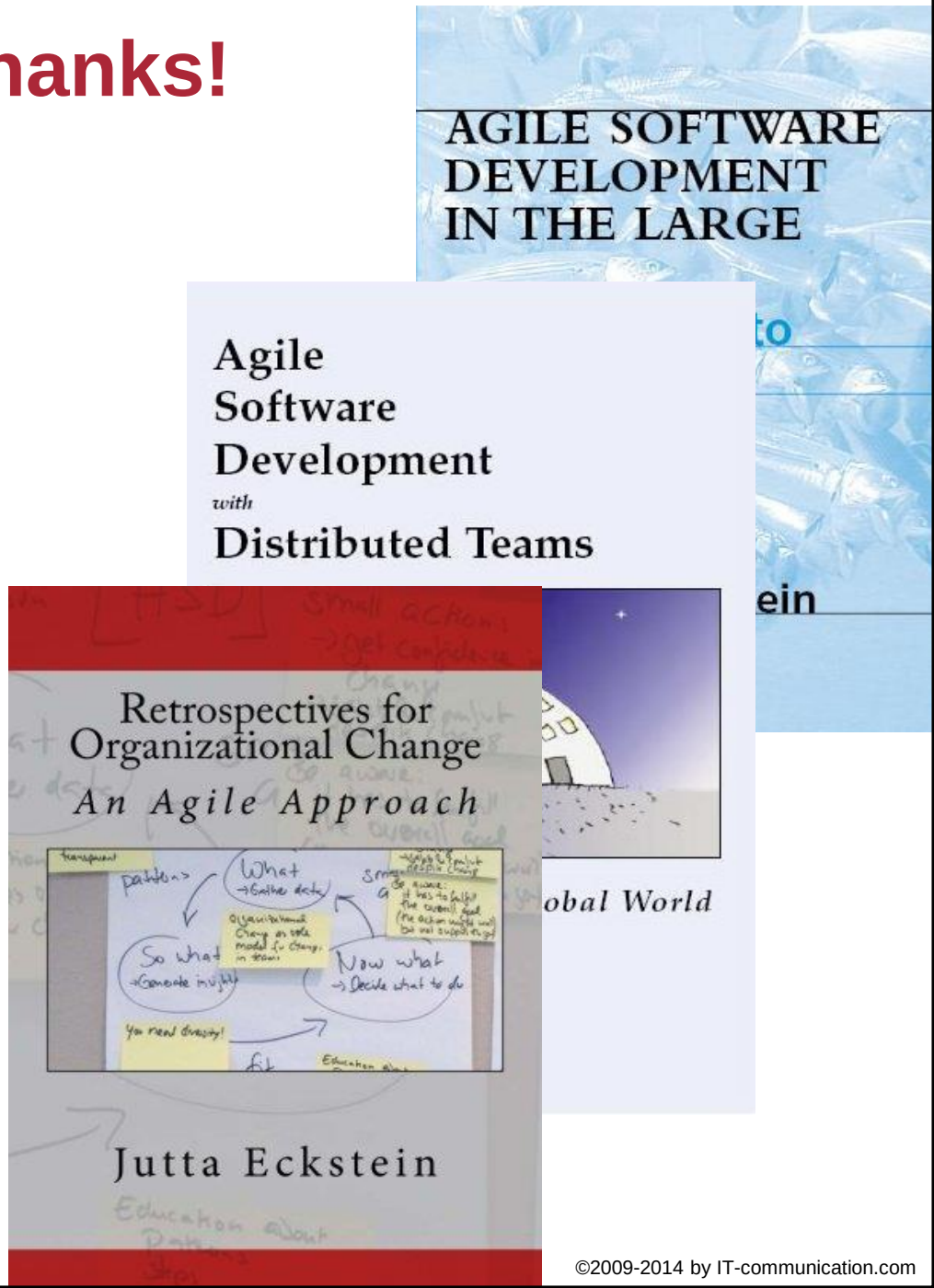

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