

Complex Projects aren't Plannable but Controllable

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Goal for the Session

**A new way of thinking about:
Planning and Controlling
in Complex Projects**

Agenda

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

Defining the Context

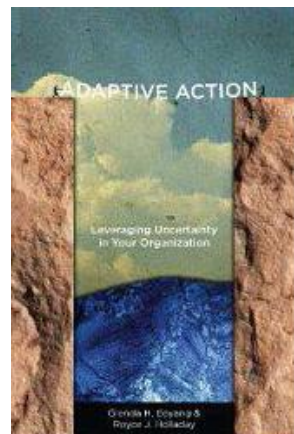
Defining the Context

- **For large and complex projects:**
 - Decisions have to be made in advance
 - Managing risk of wrong investment
 - Things will change over time

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



Findings about Predictions

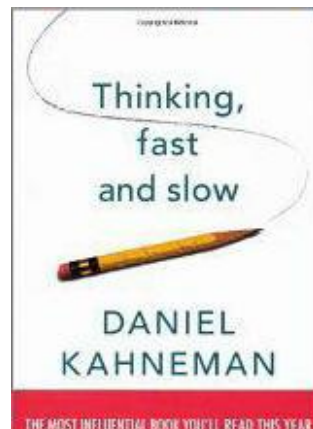
Prediction is Impossible

- **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.”*

- Daniel Kahneman: Thinking Fast and Slow



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.

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

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!

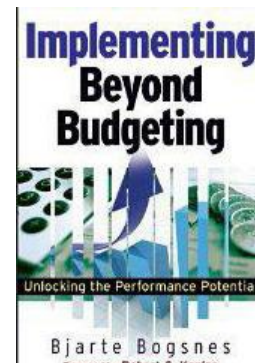
Lessons on Predictions

- 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

Learnings from Beyond Budgeting

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**
 - Bjarte Bogsnes, Implementing Beyond Budgeting
 - <http://bbbt.org>



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

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

Beyond Budgeting - Recommendation

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

Application

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

Use Value instead of Estimates

■ Value is defined by

- ROI and savings
- Risks
- Importance
- Cost of delay
- Willingness for investment

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

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

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

General

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

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**

Sources

- **Daniel Kahneman, Thinking Fast and Slow**
- **Bjarte Bogsnes, Implementing Beyond Budgeting**
 - Beyond Budgeting's home page: <http://bbbrt.org>
- **Human System Dynamics:**
 - Glenda Eoyang, Royce Holladay: Adaptive Action
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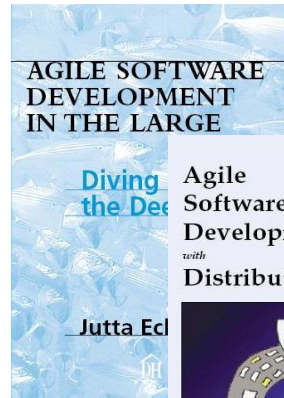
Many Thanks!

Contact information:

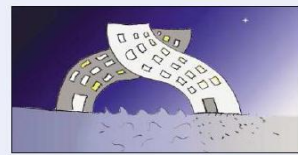
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Agile
Software
Development
with
Distributed Teams



Staying Agile in a Global World

by Jutta Eckstein

