



Software Engineering Economics

Fundamentals, Approaches, Applications

Dr. Hakan Erdogmus
kalemunresearch.com

June 10, 2010



Agenda

Morning: Part I

- Project Valuation and Structuring

Afternoon: Part II

- Evaluating Process Improvement



Goals

- Learn about
 - how to structure projects for maximum flexibility
 - the basics of project valuation
 - data requirements for evaluating software process improvement initiatives
 - how to evaluate the cost-effectiveness of process improvement initiatives
 - caveats of data collection, measurement, and cost-effectiveness evaluation



EXAMPLE CONTEXT



MedSoft

... is a fictitious medium-size privately owned health informatics company based in US

- Has 500 employees
- Is subject to high technology and market risk
- Is representative of a software dev unit of a large organization
- Develops, hosts, and customizes application and information services for the health care sector
- Started 6 years ago, profitable for the last 3 years
- Profitability is sensitive to efficiency of internal software dev processes



MedSoft's Goals and Challenges

- Short Term Goal: Maximize profitability of new ventures
 - has several new projects in the pipeline
 - but how to evaluate and structure these projects?
- Long Term Goal: Improve efficiency of internal dev processes
 - is keen on collecting process data
 - scans horizon for new approaches
 - pilots candidates in own context
 - but how to gauge their feasibility?



Will tackle
decision problems serving these goals
and
challenges underlying such decisions



Outside Scope

Software cost estimation

Macro-economics of software
development



*Indicates a
case taken
from MedSoft's
context*

CASE TITLE