

# SYSTEMS ENGINEERING INNOVATION PLATFORM:

## USER-CENTERED SYSTEMS ENGINEERING

COMPLEX SYSTEMS

CUSTOMER NEED

INDUSTRY TO CONTRIBUTE WITH:

- INNOVATIVE PROJECTS WITHIN LARGE AND ESTABLISHED COMPANIES
- SMBs
- STARTUPS

ACADEMIA TO CONTRIBUTE WITH:

- SYSTEMS ENGINEERING AND DESIGN THINKING COMBINED
- EXCEPTIONAL KNOWLEDGE WITHIN LATEST RESEARCH RESULTS AND ACADEMIC NETWORK

SYSTEM OF SYSTEMS

HUMAN ASPECTS

INDUSTRIAL CHALLENGES:

- HUGE SOLUTION SPACE, LIMITED TIME AND RESOURCES
- DON'T KNOW THE RESPONSE FROM END USER OF A NEW SOLUTION
- ENGINEERING AND MANAGEMENT CULTURE WITH FOCUS ON MATURE SYSTEMS
- HOW TO CONNECT AND DEVELOP ALREADY MATURE SYSTEMS?

MAIN GOALS:

- FASTER INNOVATION
- SELECTION OF GOOD IDEAS IN A TIMELY MANNER
- MAKE SOLUTIONS THAT CAN COMMUNICATE WITH USERS

SOLUTIONS:

- CUSTOMER NEED ANALYSES
- CONCEPTUAL MODELLING
- GIGAMAPPING
- FAST PROTOTYPING
- USER-CENTERED DESIGN
- KNOWLEDGE BASED DEVELOPMENT

PRETTY PICTURE

SE SKILLS FOR THE FUTURE TO BE PART OF MASTER AND PHD PROGRAMS:

- HOLISTIC VIEW
- EMPATHIZE IN THE DESIGN PHASE
- EARLY IDENTIFICATION OF KNOWLEDGE GAPS AND CLOSE GAPS EARLY
- KNOW HOW AND WHEN TO TEST IDEAS IN A COST-EFFECTIVE MANNER
- HUMAN ASPECTS SUCH AS FEELING NOT LOST IN ENGINEERING

INDUSTRY AS LABORATORY RESEARCH TOPICS:

- EARLY VALIDATION, HOW?
- HOW TO COPE WITH PERCEPTION AND EMOTIONS IN A TECHNICAL ENVIRONMENT?
- WHAT ASPECTS TO PROTOTYPE?
- HOW TO MAINTAIN THE EARLY ENGINEERING RESULTS THROUGHOUT THE DIFFERENT PROJECT PHASES?

PLAN:

- STARTUP SPRING 2017
- DURATION 4 YEARS
- DEADLINE APPLICATION (FORSKNINGSRÅDET): 12. OCT 2016

BUDGET:

10 MNOK  
(DEPENDENT ON INDUSTRY PARTICIPATION)

POSSIBLE FUNDING:

- OSLOFJORDFONDET
- INDUSTRY (CONTRIBUTION IN-KIND)