Welcome to our global Systems Summit



We are here
Our Earth,
a miniscule point in a huge System of Systems of Systems of ….

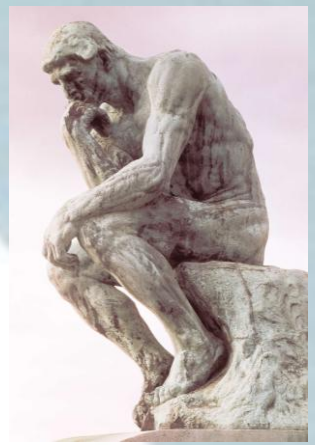




Welcome to the Netherlands

and historic Delft

What kind of „Systems“ Message did my Charts imply?



ANYBODY‘S SYSTEM

IS SOMEBODY‘S

SUBSYSTEM !

A system is what you define with Boundaries & Interfaces

Examples :

- **Microchip – Computer – Internet**
- **Suspension – Platform – Automobile – Mobility Infrastructure**
- **Rocket Engine – Launch Vehicle – Mission to Moon**
- **Cockpit - Aircraft – Carrier – Naval Fleet – Network centric SoS**

How do we make Systems Decisions ?

→ We combine the Art of Iteration with Facts and Experience

Systems Decisions

Physics, Mathematics, Engineering Sciences

Social Sciences and Experience Judgements (Intuition)



May I ask where you studied Engineering?

Examples:

- Cost and Schedule – tools are empirical & decisions experience-derived
- Test and Verification – timing, facilities, analysis input qualitiy maturity assessments
- Behaviour of new technologies, trustworthyness of supplier judgements
- Are Interface interactions of new components (hard- and software) predictable?
- Market stability, competition, achievable prices are frquently changing with time

Our Central Summit Issues and Concerns

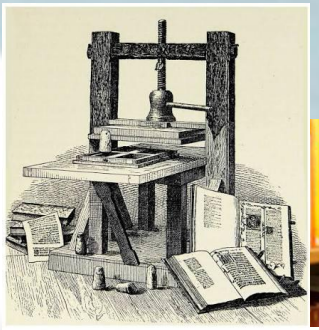
Technology and Complexity Growth

Systems Evolution, Implementation and Education

Do we have the Institutions & Human Capital to cope?

Technology and Complexity Growth

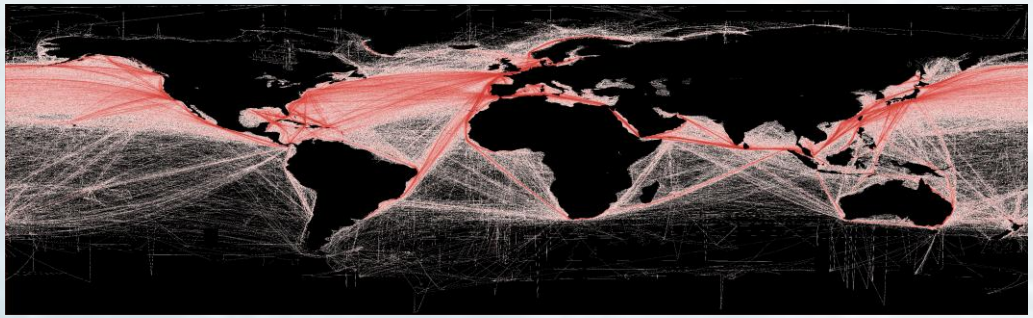
- From handwritten documents via Guttenberg‘s printing technology to books and knowledge multiplication





- From horses to automobiles, trains, airplanes, satellites and global mobility









→ Technologies have enabled Human Progress and improved our Quality of Life. But they have also increased Complexity, and often leave the „Disadvantaged behind“

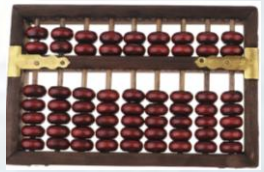
Technology and Complexity Growth

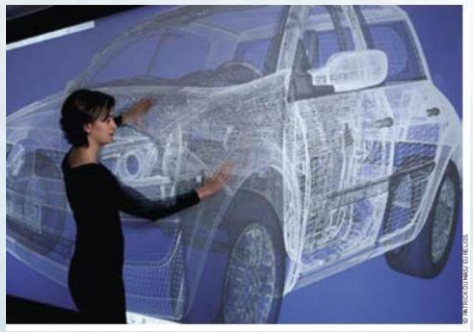
- From Grocery Shops to modern Supermarkets
  and global food supply networks





- From Abacus, to Slide Rules, PCs, Mobile Phones,
  Model-based Design Facilities, and AI Data Centers







- → Technologies create Opportunities for Innovation and economic Growth,
  but some need Security & Safety Regulations

Technology and Complexity Growth

Two Impulse Lectures will highlight Applications and Impacts



Evolving digital Technologies
driving industrial and social Innovations
Arnaud Hubaux, Head of AI Program & Strategy ASML

Cybersecurity,
a critical growing Element of Technology and industrial Security
Prof. Larry James, CEO & Co-Founder KAIperShield

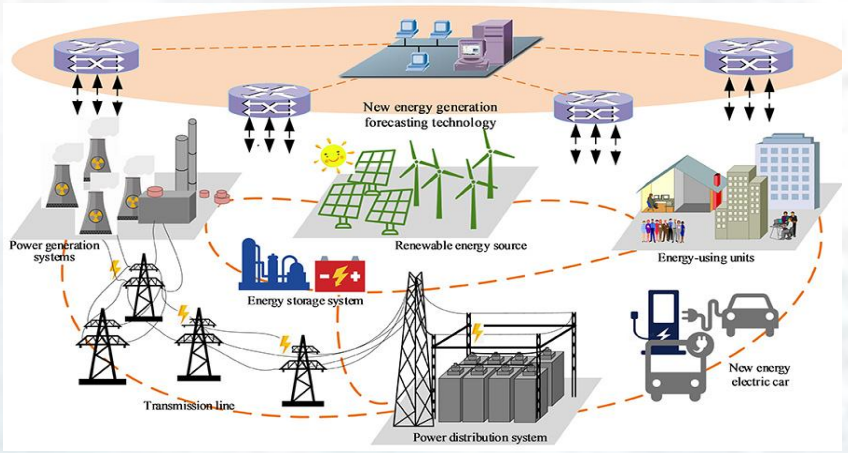
Quantum Computing
is likely to have strong impacts upon future Systems, especially when combined with AI !
QC is mentioned above! Applications lecture forgone since QC leaders meet in South Africa

Innovation and Economic Systems Transformations

Smart Agriculture



Sustainable Energy

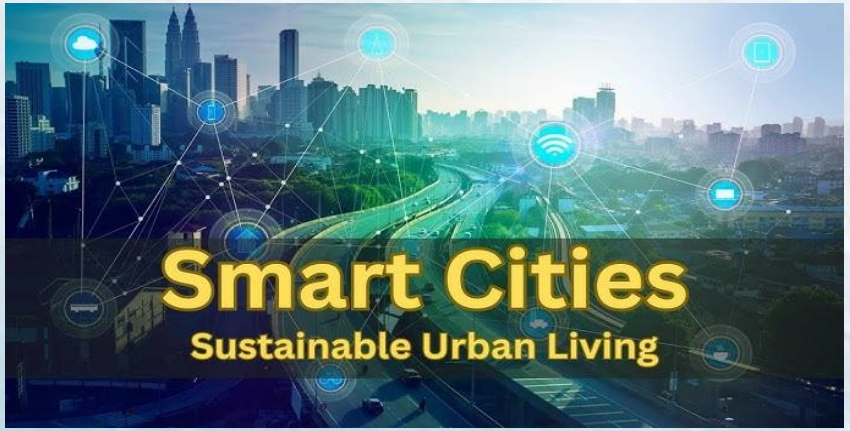


Health Services

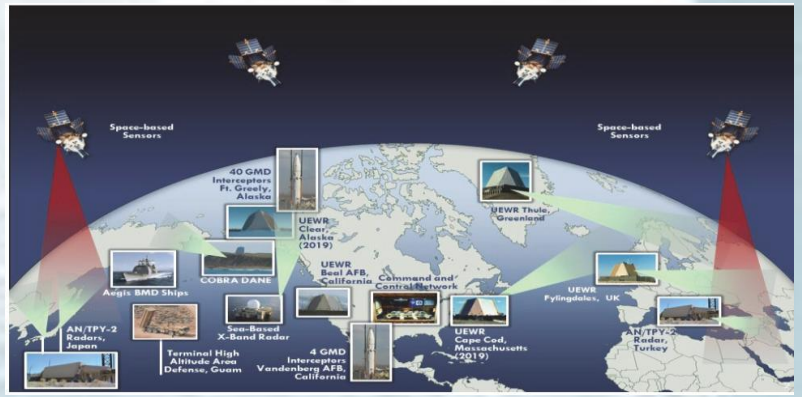


Mobility





Space & Security



→ Are they tackled with an „end-to-end“ Systems Architecture Mindset?

…and with competent agile System Workforce Teams with delegated authority?

Typical System Products from our daily Life

What do these have in common ?

















Most all have become complex, interdependent and self-adapting software/AI-defined System of Systems (SoS)

All need multi-disciplinary cooperation of specialists, system integrators and program managers at equipment, subsystem and system levels

Succesful Transformations and complex Systems All need ….

Life-cycle Systems Architecting, Engineering and Management

to obtain an early understanding of critical realization issues, such as risks, cost, schedules, sustainability, cyber-security, business opportunities, and societal impacts

Integrated Implementation Approaches

to realize trusted system concepts and designs for seamless interoperability

System Competencies at most every Product Tier

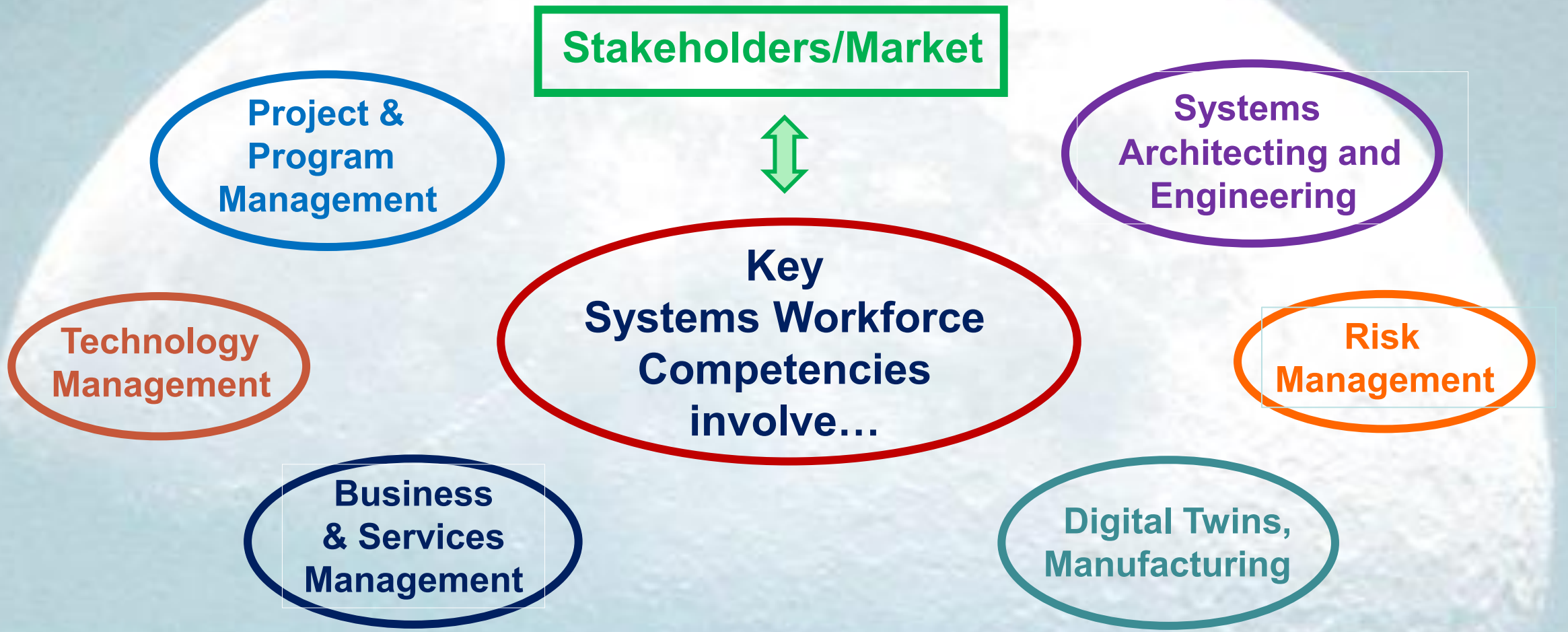
to ensure successful realization for OEM integrators & supplier teams

Pragmatic System Realization Teams

with an agile „can do“ attitude, pushing for simple solutions & tailored risks

The multiple Core Functions of a Systems Workforce

with Focus upon Market Success



All deal with Sustainability, Cyber-Security, Regulations & Supply Chain Issues

Acquiring System Competencies is a life-long Journey

From Childhood to experienced Teams

Schools



University

Postgraduate and Training



„Grey Beards“ & Teams Systems Competencies

→ Are our current mostly „vertical“ Education Models up to Date?

Do we need a Paradigm Shift?

Our Summit Organization

Five Themes, multiple Viewpoints, a Declaration & Actions



Priciple Summit Outputs

“Delft Systems Declaration”

Top-level Recommendations with supporting Background

for Executives in Governments, Agencies, Industry, Education, Professional Organizations

“Summit Themes Recommendations”

Key Findings summarized for each Theme

for System Leaders, Experts, Students

Plan is to present and hopefully adopt these during the Closing Session tomorrow

Question to all of us:

How can our Findings create Impact beyond the Summit?

Tentative Ideas for a post Summit Action Plan

Objectives

Inform Decision Makers and the global Systems Community

on the Summit Recommendations & promote Adoption/Implementation through a concerted Communication and Promotion Initiative

How can you help?

Promote the Summit findings within your organizational environment, in professional networks, conferences, peer and customer discussions, articles in professional and public media, etc. etc.

Become a „Systems Ambassador“







CERTIFICATE OF ATTENDANCE

SYSTEMS WORKFORCE SUMMIT

YES, I SUPPORT TH

„DELFT SYSTEMS DE RATION“

AND AGREE T ME A

SYST AMBASSADOR

Volunteer Certificates at the Registration Desk



THROUGH COM ING AND ADVOCATING THE APPLICATION OF THE
SUMMIT ENDATIONS IN MY PRFOFESSIONAL ENVIRONMENT

WITNESSED, 28 OCTOBER, 2026

PROF. DIPL-ING. HEINZ STOEWER, M. SC.
SUMMIT ARCHITECT

PROF. DR. IR. HESTER BIJL
SUMMIT CHAIR, RECTOR MAGNIFICUS

DELFT UNIVERSITY OF TECHNOLOGY

Many Thanks for your Support and your inspiring Contributions

Let's enjoy two Days together in a most unique Environment







But let's also reflect occasionally on how to care for our unique Planet!

We do not (yet) have a second one!

