

Systems Workforce Summit

Delft, 27 and 28 October 2026

“Innovation and Economic Transformations”

Draft Summit Working Agenda

Status: 14 Oct 2026, Website Version!

The Issues

Growing Systems Complexity has resulted in highly interdependent industrial products and public infrastructures. Strategic Transformations in the fields of energy, mobility, smart cities, climate change, security/defense and others depend upon strong multi-disciplinary system and program management capabilities.

Products and Services have evolved towards “Systems of Systems” which are shaped by digital technology and AI advancements. More critically, they depend upon human systems competencies to analyze broad issues and generate solutions by integrating customer needs and/or market prospects, engineering, economic/business, regulatory/social, cyber-security, and supply chain viewpoints.

The challenges

Digital technologies have become fundamental drivers for industry and society transformations. AI, and eventually Quantum computing, will accelerate innovation, while creating more “disrupting” issues.

Development of talents with broad System competencies needs a paradigm shift! Policy changes in government, industry, education and professional organizations are needed to ensure the availability of the Systems competent Workforce.

The approach

Following the first global System Workforce Summit in 2024, the second meeting will again be a strategic and policy-oriented event. It will focus upon needs and value of multi-disciplinary system competencies for advancing innovation and economic growth. Central will be dialogues between governments, agencies, industry, academia, and professional organizations aimed at joint recommendations/actions to mitigate System Workforce shortages.

A most unique venue

The Systems Workforce Summit will take place in the 1000-year-old church in the historic Dutch city of Delft, The Netherlands.

Draft Agenda

Tuesday, 27. October 2026

09.00 Welcome Addresses

Summit Host: Ingrid Thijssen Chair of the Executive Board, Delft University of Technology;
Peter Stolk, Chair Netherlands HighTech Program

09.15 Policy, Theme 1: Systems Context and Needs

Global Strategic Keynotes with broad transformational Messages

Chair: Jeroen Dijsselbloem, Major of Eindhoven, Chair Brainport Development, former Chair of the Dutch National Growth Fund, President of the Eurogroup, Minister of Finance of the Netherlands; **Associate Chair: Monika Hoekstra**, Managing Director Dutch NxtGen HighTech Program

Peter Wennink, Dutch Government's independent Economic and Innovation Adviser, former CEO ASML; Dutch Industry Strategy for Innovation and economic Growth, *title tbc*

Admiral James O. Ellis, Jr. USN (Ret), Annenberg Distinguished Fellow, Hoover Institution Stanford University, Chair of the Council US National Academy of Engineering (NAE); Engineering the Future of Artificial Intelligence

Radek Špicar: former Czech Deputy Prime Minister for the Economy, Vice-President of the Confederation of Industry and the European Employers Federation, Business Europe; *title tbd*

Jan Willem Hartman, Vice-Admiral, Commandant Commando Material & IT; Up-scaling Dutch Defense Production, *title tbc*

10.00 Coffee Break

10. 30 Summit Introduction and Context

Ingrid Thijssen, Chair TUD Exec. Board;

Prof Heinz Stoewer, Summit Architect;

Prof. Joris Melkert, Summit Moderator, Education Director, Aerospace Faculty, Delft University of Technology

10.45 Highlight Impulse Presentations, Theme 2: Impact of the digital Ecosystem upon economic and industrial Transformations

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

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

Q&A

11.15 Highlight Panel: Effects of Growing Complexity and Technology Advances upon future System Workforces

Chair: *Jim Ellis*; **Associate Chair:** *Monika Hoekstra*; **Members:** *Peter Wennink, Radek Spicar, Jan Willem Hartmann, Jean Ives Le Gall, Craig Heatwole* **tbc**

11.45 Lunch

12.45 Industry Implementation, Theme 3: System Competencies - as Drivers of Industry Innovation

Chair: *Jan van Vlerken*, Senior Vice President System Engineering, ASML; **Associate Chair:** *Joris van den Aker*, Program Manager Competence Development, Netherlands Organization for Applied Scientific Research, TNO

Jos Benschop, Executive Vice President Technology, ASML; *Mastering Complexity - Building the Workforce for a Systems World*

Chiara Pedersoli, CEO OHB Systems AG; *System Competences – A status view from Space*

Industry Keynotes

Jeremy Bentham, World Energy Council Co-Chair Scenarios, former Head Shell Scenarios Team; *CARPE DIEM: Scenario & Systems thinking in Business and Society*

Heiko Schroeder, Head of R&D Architecture & Governance MT, Trumpf Machine Building Company; *Tension by Design: Why the Age of AI requires Systems Leaders, not more Specialists*

Prof David Abbink, TU Delft, Human-Robot Interaction, Scientific Director FRAIM; *Robots and Humans at work? A Systems Perspective on shaping physical Work towards Industry 5.0”*

Paul Galvin, Senior Head of Group for Bioelectronics, Head of the Life Sciences Interface Group and of ICT for Health Strategic Programmes, Tyndall National Institute and Director of the ENTIRE European Digital Innovation Hub; *Engineering the Future of Healthcare: Systems Competencies for Europe's Life Sciences Innovation*

Annika Meijer-Henriksson, Head of Design and Technical Director Gripen, SAAB Group; *Managing Complexity: Technical Leadership in emerging Technologies, Human-centered Technical Leadership in an Age of continuous Disruption*

Arjen Mateboer, Director Product Development Lely Farming Innovators, System Engineering in Agritech controls Cost while enabling Complexity

Ton Peijnenburg, CTO VDL, Enabling Technologies Group; *(System Design and Integration must involve the entire Supply Chain)* **title to be verified**

Erik Teesink, Global Head of Systems Engineering at Philips MR; *Challenges of Global Development Teams and Role of Systems Engineers*

Jon Reijneveld, Co-Founder and Chief Engineer at The Exploration Company (TEC); *Systems engineering in practice: from design to flight*

14.20 Industry Panel: What kind of System Workforce Qualifications does Industry need to cope with future Challenges?

Chair: Jan van Vlerken; **Associate Chair:** Joris van den Aker; **Members:** Jos Benschop, Jeremy Bentham, Paul Galvin, Annika Meijer Henriksson, Lucas Roffel, Holger Hoos *tbc*

14.50 Coffee Break

15.10 Academia and Education, Theme 4: System Competencies Education needs a Paradigm Shift

Chair: Prof. Emma Sparks, Rector and Dean, University of New South Wales, Australia;
Associate Chair: Prof Rob Vingerhoeds, ISAE SUPAERO University, Toulouse

Strategic Education Keynote: Prof Bryan Moser, Academic Director System Design and Management Program; Next Gen Engineering Education: Judgement to Frame, Build, and Use Systems Models and Computation

Keynotes:

Prof Jakob Axelsson, Professor of Computer Science, Mälardalens University; Systems-of-Systems: A Different Paradigm for the Systems Workforce

Prof. Sondoss El Sawah, Professor of Systems and Computing at UNSW Canberra and Director of the Capability Systems Centre; The Strategic Role of the Digital Engineering Competency Framework: Insights from the Australian Experience

Prof Bernhard Rumpe, Chair Software Engineering, RWTH Aachen; Rumpe; How AI agents impact the Workforce in Systems Engineering

Prof Holger Hoos, Alexander von Humboldt Professor of AI, RWTH Aachen and Professor of Machine Learning University of Leiden; The future of AI: safe, dependable, sustainable and sovereign.

Prof Alessandro Golkar, Chair of Pico-, Nanosatellites, and Satellite Constellations, TU Munich; Systems Architecture on Day One

Prof Marcello Romano, Chair Astrodynamics, TU Munich; Hardware-In-the-Loop Spaceflight Testbeds: Bridging Systems Engineering Gaps in Graduate Education

Prof. Rob Vingerhoeds, Professor of Systems Engineering at ISAE-SUPAERO and Dean of the Systems Doctoral School of the University; From Stakeholder Needs towards Functions, physical Architectures and detail System Design

16.30 Special Topic Discussion: Effects of digital Technologies and AI upon System Competencies Education and Training

Chair: Prof Alessandro Golkar, TU Munich **Associate Chair:** Rob Vingerhoeds, ISAE SUPAERO

Ultrashort pitches by speakers from universities, industry, agencies, professional organizations, Students

Speakers

Industry: A Harding, J Reijneveld, tbc; **University:** David Abbink, Bernhard Rumpe; **Agencies:** David Nichols; **Professional Organizations:** Davide Petrillo; **Tools Viewpoint:** Dassault, tbd; **Students,** U Twente, (Name), U Eindhoven, (Name) Fontys Univ.,(Name), TU Delft: Rens van Lierop

17.00 Education Panel: How to accelerate the Systems Education Workforce Pipeline?

Chair: Prof Emma Sparks; **Associate Chair:** Prof Rob Vingerhoeds; **Members:** Jakob Axelson, Anton Ivanov, Robert J. Hubbard, Dietmar Pils, Wouter Leibrandt

17.30 End of Day 1

19.00 Summit Dinner in the Royal Church

Wednesday, 28. October 2026

09.00 Special Netherlands Session

Chair: **Peter Stolk**, Chair Netherlands HighTech Program, former Senior Vice President and CTO at Ampleon; **Assistant Chair:** Sapfo Tsoutsou, Project Manager, NxtGen

National Strategy and Systems Capability

Lukas Roffel, President, Netherlands Academy of Engineering (NAE), CTO Thales Netherlands, **Systems Capability in an Age of Complexity: An Engineering Leadership Perspective**

Peter Stolk, Chairman, Holland High Tech and NXTGEN Hightech, **National Technology Strategy and Systems Capability**

Wouter Leibbrandt, Program Council Member Systems Engineering, Holland High Tech, **Impact Across Deep Technologies: The National Systems Engineering Action Agenda**

Building a National Systems Workforce: Scaling Systems Capabilities through the NXTGEN Systems Engineering Framework

DASE Compass – A Shared Foundation for Systems Engineering Practice

Saber Darmoul, Associate Professor, University of Twente,

EduFramework – From Systems Engineering Practice to Competence Development

Sapfo Tsoutsou, Project Manager NXTGEN Hightech, Eindhoven University of Technology,

International Validation and Global Relevance

Joana Teixeira, Competence Development Manager and Learning Specialist, TNO-ESI

Complementary Contributions from the Dutch Ecosystem

Broadening Systems Engineering Across Domains

Carlos Hernández Corbato, Associate professor at the Department of Cognitive Robotics, Faculty of Mechanical Engineering, Delft University of Technology

Applied Sciences, Supply Chains and SMEs

Erik Puik Scientific Director Centre of Expertise High Tech Systems & Materials (HTSM), Fontys University of Applied Sciences

Design Methodology and Socio-Technical Systems Design

Maarten Bonnema Full Professor in Systems Engineering and Multidisciplinary Design, University of Twente

Balancing Non-Technical and Technical Competences

Ines Lopez Arteaga Director EWUU Education, Dean Bachelor & Master College, Eindhoven University of Technology

Scaling Systems Capability through Continuous Development

Joana Teixeira, , Competence Development Manager and Learning Specialist, TNO-ESI

Professional Education – From Ecosystem Learning to Industrial Capability

Casper Voogt, Head of Systems Engineering, Thales Netherlands

10:00 Netherlands Focus Panel: How do we develop Systems Capability at Scale in an increasingly complex World?

Moderator: Joana Teixeira, TNO-ESI; **Panelists:** Peter Stolk, Maarten Bonnema, Masoud Dorosti, Paul van Nunen, Arnaud de Jong, Pascal Etman

10.30 Coffee Break

10.50 Government and Agencies, Theme 5: Policy Guidance and Systems Implementation,

Chair: Prof. Larry D. James, Lt Gen, USAF (Ret), Strategic Advisor SmartSat Cooperative Research Centre, former Deputy and COO of NASA JPL; **Associate Chair:** David Nichols, CALTECH, former Director Systems and Software, NASA JPL

Strategic Agency Keynotes

Dietmar Pils, European Space Agency Director of Technology, Engineering & Quality, Head of the European Space Technology Center (ESTEC); **From traditional Systems Engineering to AI enabled Model-based Systems Engineering**

Craig Heatwole, General Manager Strategic Deterrence and Defense Division, The Aerospace Corporation, **Large Scale System-of-Systems Government Acquisition Approach in a Systems Competency-constrained Environment Agency**

Agency Keynotes

Robert J. Hubbard, Deputy Chief Engineer for Management, Office of the Chief Engineer, National Aeronautics and Space Administration (NASA); **Adapting Policy, Procurement, and Governance Processes to Enable Digital and Systems-based Modernization**

Sébastien Dubois, Head of Program Development and Communications, Clean Aviation Joint Undertaking; **From Mechanical to Digital - how Clean Aviation is Preparing the Workforce of Tomorrow**

Ron Ross, NIST Emeritus / KAlpersshield Chief Scientist; **Engineering for Compromise: Preparing the Workforce to Build Trustworthy Secure Systems in the Age of Frontier AI**

Sebastian Feuerstack, Acting Director, Institute of Systems Engineering for future Mobility, German Aerospace Center, DLR; **System Competencies for Innovation, Knowledge Transfer and Program Acceptance**

Alan Harding, AJB Creative Solutions Limited, past President INCOSE; **Project Wildfire, an Example of applying Mission Engineering to a Multi-Agency Public Response System**

12.00 Government and Agencies Panel: What do Industry and Universities expect from Governments and Agencies?

Chair: Larry James; Associate Chair: David Nichols; Members: Prof Bernhard Rumpe, Fred Abbink, Heiko Schroeder, Michael Watkins, Prof Henri Werij

12.30 Lunch

13.30 Professional Organizations, Theme 6: Cooperation for growing a scarce Systems Workforce

Chair: Clay Mowry, CEO American Institute of Aeronautics and Astronautics (AIAA), Past President International Astronautical Federation, IAF; **Associate Chair: Davide Petrillo**, AIAA Managing Director EMEA

Strategic Professional Organizations Keynote

Ania Lopez, Executive Vice-President, World Federation of Engineering Organizations (WFEO); WFEO: Connecting Global Engineering for the Workforce of Tomorrow

Professional Organizations Keynotes

Michael Watson, President, International Council on Systems Engineering (INCOSE); Fostering the Growth of Systems Engineering

Dan Isaacs, GM & CTO Digital Twin Consortium; From Testbed to Classroom: Building the Systems Workforce Industry Needs

Prof Bryan Moser, President International Society of Transdisciplinary Engineering, ISTE, *title tbd*

Klaus Thürriedl, Secretary General, European Council of Engineers Chambers, ECEC, & President of European Council of the Liberal Professions (CEPLIS), *title tbc*

Christopher Tucci, Incoming President Academy of Management; From Professional Silos to a Professional System of Systems

Yannis Ioannidis, past President Association for Computing Machinery (ACM), *title tbd*

14.40 Professional Organizations Panel: How can Professional Organizations support the needed Growth of the Systems Workforce?

Chair: Clay Mowry; Associate Chair: Davide Petrillo; Members: Ania Lopez, Christopher Tucci, Steve Records, Klaus Thürriedl, Sebastian Dubois, Naomie Verstraeten, Rob Postma tbc, Arnaud Hubaux, tbd

15.30 Coffee Break

(Conclusions Session final Preparations)

16.00 Summit Conclusions, Recommendations and Declaration

Summit Chair: *Prof Hester Bijl*, Rector Magnificus Delft University of Technology

Themes and Special Sessions Recommendations

16.05 Policy Theme	Monika Hoekstra
16.10 Highlight Impulse Presentations	Arnaud Hubeaux
16.15 Industry Theme	Jan van Vlerken/ Joris van den Aker
16.20 Academies/Education Theme	Emma Sparks/ Rob Vingerhoeds
16.25 Special Topic (digital Technos for Education)	Alessandro Golkar
16.30 Special Netherlands Session	Peter Stolk
16.35 Governments/Agencies Theme	Larry James/ David Nichols
16.40 Professional Organizations Theme	Clay Mowry/ Davide Petrillo
16.45 Monday Systems Engineering Workshop	Carlos Hernandez
16.50 Q&A	

17.00 Discussion and Adoption of the “Delft Systems Declaration”

Heinz Stoewer

17.30 Post Summit Action Plan, Discussion & Commitments

Heinz Stoewer

17.45 Concluding Remarks & Thanks

Summit Chair, Dutch NxtGen HighTech Program (Main Sponsor), Brainport, Summit Architect(s), anyone else?

18.00 END OF SUMMIT

Closing Reception at the “Oude Kerk” Venue

Summit Background Information

Summit Focus

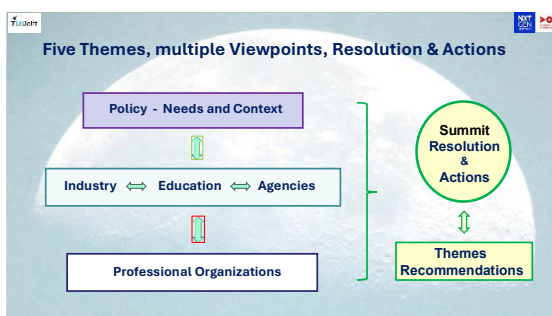
Innovation and Economic Transformations



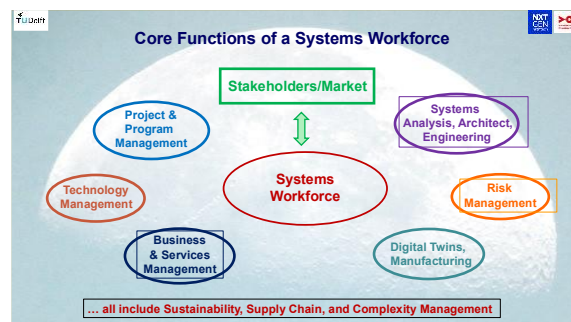
System of Systems



Summit Approach



Workforce Core Functions



Complexity Growth needs multi-disciplinary System Competencies!

Systems Workforce Definition

The Systems competent Workforce evaluates stakeholder needs for transformational initiatives or market opportunities, develops system requirements, architectures, and implementation plans with performance, cost, risk, and schedule estimates, business and regulatory options. It iterates with stakeholders to decide upon go-ahead for implementation of agreed plans.

The Systems Workforce integrates multi-disciplinary skills, selects suitable technologies, generates design solutions, digital twins and prototypes, and coordinates manufacturing, testing, verification, market and service implementations for sustained life-long operation.

Core Systems Workforce skills for realizing successful products and services include “end-to-end” life-cycle management of programs/projects, technology, business, engineering, risks, supply chain, complexity and sustainability.

Pre-Summit Systems Engineering Expert Workshop

Monday, 26 October, 13.30 – 19.00

Organization: TU Delft Systems Engineering Platform

Location: SAM XL, TU Delft Campus, Rotterdamseweg 382C

Themes: Adoption of Systems Engineering; Education and Training, Future of Systems Engineering

Chair: Prof Carlos Hernandez, TU Delft, supported by Jon Reijneveld, CTO Space Exploration Company

Helpful References

Reference to the World's first global Systems Workforce Summit (October 2024)

<https://systems-workforce.eu> - includes: ***Call for Action***, Themes Recommendations, Summit Presentations, Letter to the European Commission, and

Call for Action on Systems Architecting and Realization, issued at the International Astronautical Congress, Sydney, October 2025

NxtGen HighTech Program Conference, Thursday, October 29: there are opportunities for delegates to participate to the National Conference of the Dutch NxtGen HighTech Program in The Hague; separate free registration @ ***<https://www.hightechnl.nl/events/>***

Summit Venue

The Summit will be held **October 27 and 28** in the 1000-year-old church “Oude Kerk” in the historic city center of Delft, providing participants with an inspirational and unforgettable experience.



Receptions/Dinner

Welcome Reception, Monday, October 26, 17.30 – 19.00 hours at the Summit Venue, the 1000-year-old “**Oude Kerk**” - Delft city center, Heilige Geestkerkhof 25, 2611 HP Delft @ 5 Minutes walking distance from Delft train station

An extraordinary Summit Dinner, Tuesday, October 27, 19 to 22 hours, at the 600-year-old iconic “**Royal New Church**” which will provide delegates a once in a lifetime experience



Closing Reception, after the Conclusions Session on October 28, at the “Oude Kerk” from 18.00 to 19.00 hours

Website: <https://systems-workforce.eu>