

ON:SET

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Welcome to the June edition of our newsletter!

A quarterly round-up of everything SE-T including company news, course highlights and schedules, trainer profiles, upcoming webinars, industry conferences and featured blogs.

In this edition:

Find out where SE-T has been flying off to the last few months – we really have been getting around!

Hear our feedback from the EMEA WSEC 2023, the 11th Nordic Systems Engineering Spring Tour & the 2023 Swiss MedTech Day.

We hope you enjoy reading!

SE-T Team
Zurich

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news

It has been a busy and productive few months for SE-T. As well as delivering courses in our home turf of Switzerland we have been spreading our wings to train audiences in Norway, Germany, Turkey, and the US.

In fact, so far this year we have trained over 300 engineers across 6 countries!

It has been a real privilege to meet and teach new and diverse audiences with our bespoke training packages and flagship courses – SE Management and SE Foundations. We will be visiting these countries (and hopefully many more) in the future.



Mike Johnson and Marco Di Maio in Ankara, Turkey.

WEBINAR FOR OPTICS.ORG



Our co-founder Mike Johnson delivered a webinar for optics.org this month: “Applying Systems Engineering methodologies to the development of Optical Systems” - giving audiences the chance to understand the Systems Engineering approach for Optical Systems development and learn valuable tips and tricks for applying Systems Engineering to different phases of the Development lifecycle.

If you missed out and are interested in watching, the webinar recording is viewable on their website here: <https://register.gotowebinar.com/recording/4651748255862048855>

new course

CONCEPT OF OPERATIONS (CONOPS) - WHAT YOUR SUPPLIERS NEED TO KNOW AND HOW TO DELIVER IT

This course will provide the structure, guidance and best practice to allow “Customer” teams to create detailed and executable Concept of Operations (CONOPS), allowing better interactions with their suppliers and more accurately representing the needs of their users.

This will save the customer time and rework, whilst creating the building blocks for system design and integration.

The course can be used by candidates from across all sectors of industry that are procuring complex systems and system of systems.

Learning Outcomes

- To be able to define the types of information that shape a problem space
- To understand how to capture user needs
- To understand why CONOPS are required by industry and suppliers
- To understand the design process which is initiated by the development of a CONOPS
- To be able to describe users and their roles consistently
- To understand environmental constraints and impacts
- To enable the students create their own CONOPS when they return to work



Be sure to follow our LinkedIn page for upcoming course dates. You can connect with us [here](#).

conferences

Attended conferences

EMEA WSEC 2023

24th-26th April 2023, Sevilla



Can you spot Marco Di Maio in the middle?!

What a colourful event this was! Hosted in a great hotel within a beautiful city. We enjoyed the full programme of presentations and workshops under the theme of “Engineering a Sustainable World”.

We also experienced some of the sights of Sevilla’s annual festival “Feria de Abril” which was taking place on the streets at the same time. We had a wonderful time soaking up the lively atmosphere.

11TH NORDIC SYSTEMS ENGINEERING SPRING TOUR

22nd - 24th May 2023, Helsinki, Stockholm

We attended and presented at this event run by the 5 Nordic Chapters of INCOSE Norway, Denmark, Sweden, Finland, and Germany.

We were lucky to have a really engaging audience for our co-founder Mike Johnson who spoke about “Overcoming challenges to effectively implement Systems Engineering”.

Download Mike's presentation here: <https://www.nordic-systems-engineering-tour.com/nose-history/history-11th-nose-spring-2023/>

conferences

Attended conferences

SWISS MEDTECH DAY

13th June 2023, Bern

This was our first time attending this event. And what a success it was! Our recent expansion in offering industry specific courses, webinars, and training programmes to organisations within the MedTech sector has proved fruitful and it was great to have the opportunity to build new connections within this area.

Thank you to everyone who came to see us on the day.



(Left to Right:) Mike Johnson, Blaise Nyang, Andrew Travers

MARK YOUR CALENDARS

Swiss MedTech Day 2024 will be on the 11th of June next year!

conferences

Upcoming conferences

SWISSED 2024

18th September, Zürich Switzerland



As always we will be at SWISSED! This year's theme is "Team of Teams. System of Systems". Do you have something you would like to share with the SE community? The call for presentation is open now: <https://www.ssse.ch/content/swissed23>

SPIE PHOTONEX

24 - 26th October, Glasgow United Kingdom



The UK's premier photonics techniques and processes exhibition and technical programme. Hear the latest research updates, see the newest products and solutions, explore the technical product exhibition and make new connections.

Photonex <https://spie.org/conferences-and-exhibitions/photonex?SSO=1>

TdSE - Future needs Courage!

15th-17th Nov 2023, Würzburg



The largest German-speaking systems engineering conference which promotes the exchange between industry, consultants, tool manufacturers and research institutions. <https://www.tdse.org/>

SPACE TECH EXPO EUROPE

14th - 16th November, Bremen



The sixth edition of Europe's largest B2B event for the space industry. A must-attend event for anyone working in or interested in Space! Visit the event website here: <https://www.spacetecheexpo-europe.com/>

Be sure to come and say hello if you are attending any of the above!

blog

The top 5 reasons to invest in your Engineering team's professional development

Developing medium to high complex technical systems is challenging, even the most competent and capable Engineering Organisations can make design mistakes with massive negative consequences.

A recent example from the medical device industry is the product recall by Philips of their Continuous and Non-Continuous Ventilators (see link to article [here](#)).

This example of a product recall is one that could lead to the bankruptcy of a smaller organisation. Yet even for a company with the resources of Philips, there will, unfortunately, be many major negative impacts.

At the point of a product recall, or a delay to an ongoing project, it is too late to retrain the Engineering teams, as the top priority will be working night and day for many months (sometimes years) to resolve the actual issue.

This is the fundamental problem of when risks occur; we need to act urgently on the impact of the risk.

Prior to risks occurring, we have the options to mitigate them by training our teams, implementing improvements in the development process etc. but when they occur, we must quickly move to firefighting mode.

When analysing successful medium to high complex technical system developments, one major common factor is the number of years' experience of the technical leaders in the project teams.

For instance, roles such as the Lead Systems Engineer, Systems Architect, Software & Hardware Architects etc. Projects led by technical leaders with 10+ years' experience in the organisation, having worked across many projects during different phases of the LifeCycle, has benefits worth more than any other attribute.

Continuous professional development in my opinion is the solution to avoiding costly, embarrassing issues such as product recalls.

In my role as an SE trainer, I often have discussions with individuals or organisations who have enquired about specific training for their teams as they are keen to enhance a skillset or plug a knowledge gap for a particular project. They have pinpointed a weak area and want to strengthen it as swiftly as possible.

blog

The top 5 reasons to invest in your Engineering team's professional development

And coming to a company like ours is absolutely the right thing to do. But I will always ask them about their long-term plans for developing their teams.

It is certainly admirable that they are looking to educate their teams but is this standard practise?

Do they support their employees throughout their career or only when it is necessary for a given project?

Professional development needs to be ongoing. If you invest in it over the span of your employee's work-life you will reap the benefits as an organisation.

I promote this not only for personal interest but as it is strongly based on my personal experience.

I have been fortunate enough to work in organisations where professional development is highly valued, encouraged and expected – intertwined, if you like, within the job role and culture. And I have witnessed the positive impact – both as an SE manager and a trainer - this has on teams, productivity, and return on investment. Individual professional development must be properly and continuously nurtured for success.

With my experience in mind, I present to you my top 5 reasons to invest in your Systems Engineers' professional development:

The spend is minimal

The percentage of annual spend needed to invest in professional development is minimal when compared to the potential profit gain and annual outputs. It is a small monetary investment when balanced against the tangible gains for your organisation.

It makes employees feel valued

It really pays to have a clear process when it comes to professional development. Employees need to be aware of what they can apply for, who is responsible for agreeing additional training, and that it is encouraged within the organisation. If you invest in enhancing knowledge, skills and practice your employees will notice. They will feel appreciated. You are likely to be repaid with individuals who are dedicated, motivated and loyal to your organisation. I have spoken with many excellent Engineers who left their companies because they were not investing in the people. The people are every organisation's most precious and valuable resource.

blog

The top 5 reasons to invest in your Engineering team's professional development

It increases organisational capabilities

With a global shortage of Senior Systems Engineers and Lead Systems Engineers, investing in professional development programmes is a fundamental need which can rapidly increase their SE maturity and capabilities in a low risk, cost effective way.

It improves team performance

Employees will apply their enhanced or advanced knowledge, problem-solving skills, improved practice, and expertise into their projects meaning a higher chance of an on-time, to-cost complex systems development. This means your customers will want to do further business with your company in the future.

It also encourages innovative thinking – the key to enhancing organizational success. With innovation comes the generation of novel ideas, the increase of revenue and consumer satisfaction and a differentiation from competitors.

It saves money on projects

In the development of complex systems, it is always possible that a costly mistake is made. Even with very clever engineers, this still happens. As stated above, this can have catastrophic consequences – not only financially but in terms of reputation, motivation, and stakeholder trust. Investing in continuous professional development reduces the risk of unpredicted, unnecessary expenditure, creating a fire-fighting culture, and certainly saves you money in the long-term.

So, my advice to you is not think of Continuous Professional Development as something that takes employees away from projects or as a knee-jerk reaction to complex problems. Think of it as a mutual, valuable investment – if you grow your people, you will grow your organisation.

-Mike Johnson

Interested in learning more? SE-T offers a comprehensive Systems Engineering – Professional Development Programme (SE-PDP) which is structured to be delivered over four on-site training sessions, covering three main areas of Systems Engineering:

- End-to-end complex systems development (6-days)
- Integrating specialities / quality attributes applicable to the Customer (3-days)
- SE Matrix Management & Leadership (3-days)

For a discussion about your organisation's training needs. Book a call with us [here](#).

upcoming courses

JULY

03 - 07
10 - 12

SE Advanced
Requirements Engineering

Zürich
Zürich

SEPTEMBER

04 - 06
21 - 22

Systems Architecting (Intermediate level)
Concept of Operations (CONOPS) - What your
suppliers need to know and how to deliver it

Zürich
Zürich

OCTOBER

09 - 10
19 - 20
23 - 24
25 - 27
25 - 27
27
30 - 01Nov

RE - The Hitchhikers Guide
Self & Social Competence for Engineers
Practical Estimations
SE Foundations
Using SCRUM successfully
SE in a nutshell
SE Foundations

Zürich
Zürich
Zürich
Stuttgart
Zürich
Online
Zürich

"The purpose and real value
of systems engineering
is to keep going around the loop;
find inadequacies and make improvements."

Robert E. Machol

