

# ON:SET

QUARTERLY NEWSLETTER - SEPTEMBER 2022



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**MIKE JOHNSON**  
**CO-FOUNDER & TRAINER**

# A MESSAGE FROM MIKE.

*"If you never change your  
mind, why have one?"*

*- Edward De Bono*

Welcome to our Q3 2022 newsletter!

I have been thinking recently about how we can get stuck in a rut. For instance, we find a process that is adequate to complete a task and we repeat this until it becomes routine - which results in a loss of ability to think creatively about alternative solutions.

Or perhaps we always order the same dish off a menu because we know what we like and we want the comfort and guarantee of a pleasing meal.

By sticking to what we know we gain reassurance in knowing the outcome.

But where is the adventure? The discovery? Life is surely plainer and more muted if we stick to the same things?

I would like to challenge everyone to make a conscious change this week.

Do something differently. Make an unexpected decision and cast that safety net aside. It could be as simple as walking another route to work or cooking up a new recipe.

But see what happens.

Perhaps you may not like the alternative - or perhaps you will unearth something awesome!

As Edward de Bono says: "If you never change your mind, why have one?"

Cheers,  
Mike

Connect with me! 

Join Mike on any of his upcoming courses:

05 - 07 October  
27 - 28 October  
02 December

**SE Foundations**  
**SE Management**  
**Technical Problem Solving**

Visit our website

## SWISSED - 12th September 2022



Photo: SSSE

We say it every year but it really was a pleasure to attend **SWISSED22**.

This year's **SWISSED** ran under the theme: **From Design to Reality - Walking up the "V"**.

We felt privileged to have four of our SE-Training course presenters speaking under various streams - **Tom Gilb, Mohammad Chami, Marco Serra and Mike Johnson** - seeing them in action made us feel even more inspired and connected to the event.

The stunning views from the lakeside venue, the slick organisation (thank you SSSE!) and the enthusiasm shown from

both presenters and attendees created an atmosphere which felt both supportive and united.

And it was not just the SE-T Team who were impressed by their talks - **Mike and Mohammad won awards for the best presentations!** Congratulations to you both!

We also had a successful day networking and mingling - welcoming some new and familiar faces at our stand and telling them about our courses and services.

**SWISSED22 you were great.**

We can't wait to see you again in 2023!



# news

## New Course

### What is Systems Engineering (SE)?

We are developing a half day "What is SE?" course, targeted to people who don't do Systems Engineering, and probably never will do Systems Engineering!

But, they work close to Systems Engineers and/or the Systems Engineering department. **The intended attendees for such a course work in departments such as, HR, Procurement and Quality.**

The half-day course can be delivered remotely, and will give ample time and opportunities for the attendees to speak with an SE expert about the peculiarities of their discipline, as well as covering fundamental topics on the origins of Systems Engineering, the role, the processes, and the value of Systems Engineering.

## Services

Did you know we give advice on **SE engineering tools**?

We can help you to best **identify and address** your needs on software engineering tools. Our experts will lead you through a thorough exploration of your requisites then define, develop and implement the optimal 'tools suite' for your technical and organisational needs.

For more information visit our services page: <https://www.se-training.net/en/#Services>

I'M  
NEW

## New Trainer



### Marco Serra

We have recently had the pleasure of recruiting another trainer to our SE-T Team, Marco Serra, who co-presented our flagship SE Foundations course back in May.

Marco, we welcome you to the team.

Marco has a diverse wealth of experience in the **Aerospace, Automotive, Defence and Energy industries**, working with clients internationally for almost 30 years.

He holds **two Master's Degrees in Mechanical Engineering and in Engineering and Management**.

Professional Experience:

- Working on the **thermomechanical design of optical terminals for inter-satellite communications**.
- Integrally involved in the initial conceptual development and technology transfer assessment of a **sample handling and analysis system intended to receive and analyse material returned to Earth on Nasa's Mars Sample Return Mission**.
- Consulting in the Oil & Gas and Energy industries providing **system and component design support, conducting failure investigations**, providing technical expertise in legal disputes, validating system designs, and developing analysis methodologies for **complex fluid-mechanical simulations**.

Connect with Marco!



## Upcoming Conferences

### Join us at the SpaceTech Expo from 15 - 17 November 2022!

The 5th edition of Europe's largest B2B event for the aerospace industry takes place in Bremen, Germany. We exhibited here last year and had a blast! (see what we did there?) and we will be doing the same this year. Spacetechnology is a fantastic opportunity to network, showcase your business and discover what's happening in the industry. We suggest you get this one in your diary.

Attendance is free.

Register here: <https://www.spacetechnologyexpo.eu/register-now>

### SE-Training is a proud sponsor of TdSE 2022

The Tag Des Systems Engineering (TdSE 2022) conference is the largest German-speaking conference specialising on the topic of Systems Engineering, promoting "the exchange of industry, consultants, tool manufacturers and research institutions".

The TdSE will take place as a physical event in Paderborn, Germany, from 16 - 18 November 2022 under the motto "25 years GfSE".

Get your tickets here: <https://www.tdse.org/anmeldung-tdse-2022.html>

# The Ambiguous role of the Systems Engineer

A systems engineer works at the core of a project. Amongst many things - they oversee team members, establish common ground between diverse people, connect divergent disciplines, communicate with stakeholders and manage demanding situations - all whilst applying their knowledge to complex problems and finding solutions.

Yet one may find that the role and responsibilities of the systems engineer tend to vary in different organisations and projects. The lines are somewhat blurry when it comes to defining the role of the systems engineer.

To begin with, there are two different types of “system engineers”.

The first is referred to as a “systems engineer” but is in fact a SYS admin (system administrator) responsible for IT. The other can be defined as:

*"Systems engineers concentrate their efforts on the aspects of the engineering process (requirements definition, top-level functional designs, project management, life cycle cost analysis,...) that serve to organize and coordinate other engineering activities. The systems engineer is the primary interface between management, customers, suppliers, and specialty engineers in the systems development process." (retrieved from SEBoK v. 2.6, released 20 May 2022).*

Here, I address the latter:

The SeBoK definition describes the systems engineer as the “interceder” of the system, responsible for conducting the orchestra of the project; dealing with various disciplines of engineering (mechanical, electrical, electronics, communication, and SW engineering) and science (physics and materials science, and engineering) as well as communicating with stakeholders (project management, marketing, technical writing) and ILS (Integrated Logistical Support) engineers. All these elements are crucial contributors to a successful system.

Since the systems engineer role is broad, other functional roles working on the system (often poorly defined) can be referred to as "systems engineers". Starting with the various product managers dealing with the definitions of functions in the systems (an ability of the system such as the RF channel in communication or Radar systems), continuing to the analyst responsible for the algorithms or simulations of some functionality or aspects of the system and ending with the integration engineer - these people can all be referred to, in some organizations, as "systems engineers".

An additional source of confusion is in the requirement – a systems engineer should be a mature engineer that has experienced the system for several years, paying homage to engineering by developing their knowledge and skills on several projects.

Yet not all systems engineers meet this requirement of seniority; many are recent graduates (that are good enough, but not good enough to be called a "systems engineer" in a mistakenly named role). It is becoming an overused and dangerous simplification to call so many people "systems engineers" - especially if we then assume they can fulfil the job expectations and specific requirements of a true systems engineer.

One may meet systems engineers coming from various sides of the system (engineering fields or physics). Many demonstrate good performance whilst others may lack guidance. Many have attended a systems engineering course, many have completed a degree, others neither. Therefore, there is diversity in systems engineering – one may step into a room filled with “systems engineers” and each one will have a different professional diploma, experience, etc.

I believe one of the first key priorities when establishing a project is to focus on the role and responsibilities of the system engineer. This definition of responsibility is integral to project success – as is the knowledge you have a systems engineer who can do the job.

So, if we are to agree to the SeBoK definition of a “systems engineer” then it’s surely worth pondering this challenge: that the one "person" in the room responsible for the coordination of all other members of the project is also the one who has the most ambiguous role.



# Course & Webinar Calendar

## COURSES

### Fundamentals of System and Product Safety

03 - 04 October  
Richard Maguire & Jim Mateer

### SE Foundations

05 - 07 October  
Mike Johnson & Marco Di Maio

### Design for Security

06 - 07 October  
Stephan Marwedel

### SE Management

27 - 28 October  
Mike Johnson

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### Design for Privacy

10 - 11 November  
Hakan Hasserbetci

### Systems Architecting

28 - 30 November  
Marco di Maio

### Technical Problem Solving

02 December  
Mike Johnson

[Click to view all courses](#)

## WEBINARS

### Embedded Requirements Engineering

20 October  
Marco di Maio

### The OODA Loop

27 October  
Clinton D. Pope

*New webinars are added on a regular basis. Follow us on LinkedIn to be notified of all upcoming free webinars!*

[Click to view our events page on LinkedIn](#)

