Intro to Agile for Industrial & Systems Engineers

Webinar Leaders

D. Scott Sink, ISE @ OSU
Joan Tafoya, Sandia National Labs

18 April 2019

Sandia National Laboratories is a multi-mission laboratory managed and operated by National Technology & Engineering Solutions of Sandia, LLC, a wholly owned subsidiary of Honeywell International Inc., for the U.S. Department of Energy’s National Nuclear Security Administration under contract DE-NA0003525.
Agenda

12:00 Scott tee-up and framing
12:15 Joan evolve the Topic
12:45 Scott Close-out

This Webinar is provided in partnership with the following IISE ‘affinity groups’:

- The Michigan and Louisville Chapters
- The Industrial Advisory Board
- The Young Professionals Group
- The Society for Engineering and Management Systems
- The Society for Health Systems
- The Council on Industrial and Systems Engineering
- And, the Industry Practitioner Track Program Committee for the Annual IISE Conference in Orlando in May 2019.
In case you missed these….

26 Feb (12-1 pm Eastern) SMART ANALYTICS
To Register for this Webinar, use this link:

Jared Frederici, The Poirier Group; Matheus Scuta, Global Manufacturing Analytics, Scientist, Ford; and, Vignesh Gundesha, Data Analyst at the James Cancer Hospital and Solove Research Institute will also be part of the Industry Practitioner Track in Orlando in May and this Webinar is also a sneak preview of their more detailed training session there. The Focus is on “Smart Analytics”. The use of the word “Smart” implies a number of things that we’ll cover in the Webinar:

- Effective and efficient data capture that is based on more intelligent data models;
- Better designed and integrated Decision Support Systems, improved modeling of what it really takes to support, provoke timely and effective decisions that serve to drive rapid improvement in performance;
- Intelligent (machine learning) database management that improves data integrity and also completeness and ease of analytics;
- Blending of traditional ISE measurement principles and methods to augment, add to, enrich data availability. Often our problem is not Big Data, rather it’s poor data, too little data, not the right data or no data;
- And more…

This Webinar will be an overview of what we’ll cover in the expanded 60-minute development session in Orlando in May.

5 March (12-1 pm Eastern) BECOMING A CHANGE MASTER
To register for this Webinar, use this link:

Bob Gold, is one of the world’s leading behavioral technologists with more than 20 years of applied research and development in the growing field of digital human persuasion and motivation. He joined Scott for a Webinar on The Art and Science of Persuasion and also wrote an article for the ISE magazine back in 2017. Bob and Scott lag learn again to present practical guidance on how you can improve your Change Leadership and Management knowledge and skills and migrate to Change Master levels of competency and proficiency.

This Webinar is part of our Soft Skills Development Track of Offerings from IISE, Chapter #1 and a number of our Societies and Divisions.

Bob and Scott will bring their unique points of views and experiences to bear on how ISES, in particular, can continue to develop their change leadership and management knowledge and skills. Becoming a Change Master isn’t something that just happens. Very few of us are “Naturals” at leading and causing change. It takes a conscious strategy and plan that we will outline for you.

This is a 60 minute version of an 80-minute development session that Dave Poirier and Scott will do for ISE in Orlando in May. That session will focus on “The Roller Coaster of Change”. Intensive 3-5 day sessions aimed at catalyzing a major mind-shift, step-function improvement in knowledge and skill relative to change mastering.
Just Past and upcoming Webinars

19 March (12-1 pm Eastern) SNEAK PREVIEW of THE INDUSTRY PRACTITIONER TRACK

Attend this Webinar, participate by asking questions, and earn a chance to get a $370 Discount on Registration to the ISIE Annual Conference in Orlando in May!

Scott Sink, Kaz Takeda, Disney, and Jared Frederick, The Porter Group will give you a high level four guide of the 25 Development Sessions we have assembled for Industry Practitioners, Young Professionals and Students in ISIE. We will give you a behind the scenes view of how our invited Professionals will be sharing, giving you a great and more detailed view of the value you will get, personally and professionally, from the great program.

We’ll also share all the networking and fun wrapsaround things we’ve designed for you that augment the professional development opportunities.

So, don’t miss this sneak preview and opportunity to win a deep discount on Registration to the Premier ISIE Event of the Year. The last two pages of our Monthly Memo provide an overview of what we’ll be covering in this webinar. To Register go to this link: https://www.isie.org/details.aspx?id=48487

24 April (12-1 pm Eastern) BEST OF BEST INTEGRATED LEAN/SIGMA CERTIFICATION CAPSTONE PRESENTATIONS from ISIE at OSU

This is our annual webinar that showcases the best in class ISIE/ILSS Certification Capstone Projects. This version of ISIE Capstone is a three-semester program that results in a Black Belt Certificate and then a Green Belt Certification to augment the ISIE. A unique program, exclusive to ISIE at Ohio State.

You will have a chance to see three great process improvement projects in detail. We will have at least one from Healthcare, one from Manufacturing/Production, and then one in Service Systems to provide balance.

This is our most popular webinar of the year, and many of our members really value seeing what our young ISIE’s are learning and how they are able to apply what they’ve learned to create value for organizations in the Greater Columbus Area.

Hear from 3 of our great young ISIE’s as they overview their Green Belt Certification Capstone Projects.

We’ll select the best in class projects and ensure they span industries and types of problems focused on saving.

We’ll also make sure to add a Design for Lean/Sigma project (DILSOM) to show you how ISIE’s go at those.

Our Members in Chapter #1 consistently tell us this is their favorite annual webinar.

To view previous years ILSS Capstone Project Webinars, please go to these links:
https://www.isie.org/Details.aspx?id=43925

18 April Agile/Scrum/Sprints for ISE’s (Joan Tafoya, Sandia National Labs & CISE and Scott Sink, ISIE at OSU & CISE)

One of the things that the Council on Industrial and Systems Engineering focuses on is Continuous Learning and Development and continuous benchmarking.

Joan Tafoya and Scott Sink, both CISE members have joined forces to do some rapid learning (including experiential, reduction to practice learning) and put together a webinar that will overview how the Principles and Methods of Agile, Scrums, Sprints, etc. can be applied to product and process improvement. More on this new offering next month.
Questions?

How We’ll Handle

Please write your question in the webinar question web form. We will address as many as we can at the end of the webinar and send and email with follow up’s to attendees for those not able to be responded to.
Purpose, Objectives, Agenda

Key Points:

- The Three-Ball Challenge ISE’s face
- Many organizations are rapidly evolving their Data and Implementation Science Capabilities
- The Concept and Principles and Methods of Agile are gradually creeping their way into ISE and the projects we work on
- The Pragmatic First Steps are simple, if there’s a will there is a way....
ISE and Service Systems Engineering
As ISE’s, when we get a project, an opportunity to capture, we have three ball’s we have to juggle:

1. Solve the Focal Problem, Get to DONE, Achieve the objectives and outcomes of the project (Quality of the Solution)
2. Program and Project Management (Resource Management over time)
3. Change Leadership and Management (Acceptance of the Solution—Implementation, Deployment, Sustainability)

In our previous Webinar on the Art and Science of Persuasion and Change Mastery—we used this as our framework.

In this Webinar, we are going to zoom in on how to specifically improve your ability to juggle the second ball better.
Got to be a better way

- Integrated LeanSigma but faster!!!
- Operational Analytics
- Implementation Science
- how do we drive innovation, improvement, new products and services faster, more effectively and efficiently

- Speed and Quality are the name of the game in today’s hyper connected world
History of Agile
The important highlights as I see them...

1980 – Toyota Production System (TPS) becomes popular in manufacturing, the beginnings of ‘Lean’

1990 – Wicked Problems, Righteous Solutions by Peter DeGrace & Leslie Hulet Stahl discusses the scrum approach and other Lean methods for Software Development

1995 – Adaptive Software Development, Feature Driven Development, and Dynamic Systems Development Method (DSDM), all begin to evolve

1999 – Extreme Programming Explained is published by Kent Beck


1995 – Ken Schwaber & Jeff Sutherland present Scrum methodology for Business object design and implementation at OOPSLA ’95 workshop proceedings

2001 – Ken Schwaber & Mike Beedle publish the now famous: Agile Software Development with Scrum

2005ish – Agile Unified Process (AUP) - Scott Ambler, Open Unified Process (OpenUp) - eclipse project, Essential Unified Process (EssUP) - Ivar Jacobson; all start to emerge

2006 – Implementing Lean Software Development, by Mary and Tom Poppendieck, introduces Kanban

2010 – A Practical Guide to Distributed Scrum is published by: Elizabeth Woodward, Steffan Surdek, & Matthew Ganis

2001 – The Agile Manifesto is signed
Agile is a mindset, described by the four values and the twelve principles of the Agile Manifesto, and manifested through an unlimited number of practices, tools and processes. Implementing the practices, tools and processes without the Agile mindset, values and
The Manifesto

AGILE MANIFESTO

‘ITERATIVE AND INCREMENTAL’
The final outcome is achieved through a set of incremental iterations. Every iteration is a complete development cycle, leading into a potentially marketable product.

‘SUSTAINABILITY’
Done is not inherently applicable in the face of divergent assumptions. The fundamental requirement to deliver the final products and features requires a generic and global applicability of ‘done’.

‘COLLABORATION AND ADAPTABILITY’
Team interaction that leads to better productivity.

WELCOME AND RESPOND TO ‘CHANGE’
In order to retain competitiveness, it is important to identify, acknowledge and welcome ‘change’.

FLEXIBLE ROLES AND ‘EQUALITY’
Cross-functional teams, without structural linkages prove to be more collaborative.

CONTINUOUS IMPROVEMENT
The delivery process is a learning journey and the team should continuously re-evaluate and adjust the process accordingly.
The Values

Agile Values (from the Agile Manifesto)

The Agile Manifesto establishes a set of four values that are people-centric and results-driven:

- Individuals and Interactions over Processes and Tools
- Working Software over Comprehensive Documentation
- Responding to Change over Following a Plan
- Customer Collaboration over Contract Negotiation

That is, while there is value in the items on the right, we value the items on the left more.

(www.agilemanifesto.org)

Brad Appleton  Values & Principles of Agile Software Development
The 12 agile principles

1. Satisfy the customer
2. Welcome change
3. Deliver frequently
4. Work together
5. Trust and support
6. Face-to-face conversation
7. Working software
8. Sustainable development
9. Continuous attention
10. Maintain simplicity
11. Self-organizing teams
12. Reflect and adjust
Agile feels like what doing 2-second Lean feels like to me

If any of you have experimented with or installed, implemented a 2-second lean program, you know how Agile feels.

The pace is quick, the focus is on ‘baby steps’, little improvements that add up.

So the Agile Method sort of feels like that, the sense of urgency, the ‘Takt’ time accelerates—but not at expense of quality.
For ISE, I see Agile as a ‘method’ for our BPI work.
Provoke timely and effective decisions and actions (shorten ‘latency’)

- “Above the line” analyst role
  - Extract features based on questions you have to answer by ‘torturing’ the data until it speaks to you and others. Pick right metrics of interest!!
  - Apply curiosity & business acumen to data & analyses – create new knowledge, insights, ‘aha’s’
  - Apply data visualization techniques to aid in telling the right story – as in life, so in business: the best story wins …Develop the Art of Great Story Lines and Powerful Visualizations and stay focused on driving the ‘end game’
I still have students read this article......

The New Industrial Engineering: Information Technology and Business Process Redesign

Those aspiring to improve the way work is done must begin to apply the capabilities of information technology to redesign business processes. Business process design and information technology are natural partners, yet industrial engineers have never fully exploited their relationship. The authors argue, in fact, that it has barely been exploited at all. But the organizations that have used IT to redesign boundary-crossing, customer-driven processes have benefited enormously. This article explains why.
Where ISE is headed...

Digital Transformation People Process Technologies

- New Talents: Adapt it to your needs and capture your audience's attention.
- Customer Centricity: Adapt it to your needs and capture your audience's attention.
- Mindset: Adapt it to your needs and capture your audience's attention.
- Business Model: Adapt it to your needs and capture your audience's attention.
- Collaboration: Adapt it to your needs and capture your audience's attention.
- Agility: Adapt it to your needs and capture your audience's attention.
- Reboot: Adapt it to your needs and capture your audience's attention.
- Data Driven: Adapt it to your needs and capture your audience's attention.
- Digital Value: Adapt it to your needs and capture your audience's attention.
Pass baton to Joan

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Agile Scrum:
Another way for ISEs to think about implementing improvements to constantly deliver value to the customer

Joan Tafoya
Senior Manager, Sandia National Labs
Are the right tools in your tool box?

ISE’s have been taught many tools and processes for improvement.

Do you have one that:

- Embraces changing requirements?
- Continually adds value to the customer?
- Strengthens team collaboration and performance with built in continuous learning?

Agile Scrum may be the next tool you should add to your box.
Does this sound like the “typical day”?

<table>
<thead>
<tr>
<th>Market Environment</th>
<th>Market conditions are <strong>stable</strong> and predictable</th>
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<tbody>
<tr>
<td>Customer Involvement</td>
<td><strong>Requirements are clear</strong> and will remain stable. Customers unavailable for constant collaboration</td>
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<tr>
<td>Problem Type</td>
<td>Problems can be solved sequentially in functional silos. Similar work has been done before</td>
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<td>Modularity of Work</td>
<td>Customers cannot start testing parts of the product until <strong>everything is complete</strong>. Late changes are expensive or impossible</td>
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**Name:** Paula Production  
**Job Role:** Production Line Supervisor  

**Typical Day:**  
I start early to get a pass down from the night shift. We assess our performance to the weekly output goal and adjust plans. I set direction for the line workers on priority areas and production targets. Frequently I’m called to help with unplanned events.  

**Pain points:**  
Down equipment, raw inventory not arriving on time or not of the quality needed.

Source: HBR “Embracing Agile”, May 2016
What kind of world do you live in?

Or is this more of the “typical day”?

Name: Diana Development

Job Role: Product Development engineer

Typical Day:
My team is working on the next generation multi-rotor drone. We start our day off with a ‘daily stand up’ to share what we have done yesterday, what we plan to do today and help needed. I then spend my day either designing experiments or creating prototypes to test ideas.

Pain points:
Getting time in the lab to build prototypes.
Addressing customer complaints that the field can’t resolve – it takes away from development time.

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Source: HBR “Embracing Agile”, May 2016
Agile may be a better way to work for your world

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<td>Examples</td>
<td>sales calls, accounting, manufacturing processes, equipment maintenance</td>
<td><strong>product development, strategic planning, supply chain challenges, resource allocation decisions</strong></td>
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Source: HBR “Embracing Agile”, May 2016
Agile Values and Principles

Born in 2001 from the necessity in the changing software landscape, thought leaders brought forth the *Agile Manifesto*.

** Individuals and Interactions **
** over ** Processes and Tools

** Working Prototypes **
** over ** Excessive documentation

** Customer Collaboration **
** over ** Contract negotiation

** Responding to Change **
** over ** Following a plan
Where does your typical problem land?

- **Agile Scrum**
  - known
  - unknown

- **Lean Startup**
  - unknown
  - known

- **Waterfall**
  - known

- **Lean Kanban**
  - known
Agile Scrum vs Waterfall in Project Execution

**Waterfall**
- Requirements (fixed)
- Design
- Development (gate)
- Testing (gate)
- Deployment
- Big outcome at end

**Agile Scrum**
- Requirements (variable)
- Design
- Development
- Testing
- Deployment
- Cumulative outcomes

Agile Scrum

Waterfall
Agile Scrum: An overview

Inputs from Executives, Team, Stakeholders, Customers, Users

Product Owner

The Team

Product Backlog

- Ranked list of what is required: features, stories, ...

Sprint Planning Meeting

Team selects starting at top as much as it can commit to deliver by end of Sprint

Source: Neon Rain Interactive – Agile For All
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Sprint Backlog

Task Breakout

Sprint

1-4 Week Sprint

Sprint end date and team deliverable do not change

Source: Neon Rain Interactive – Agile For All
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Daily Scrum Meeting

Every 24 Hours

Scrum Master

Burndown/up Charts

Source: Neon Rain Interactive – Agile For All
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Sprint Backlog

Burndown/up Charts

Every 24 Hours

Scrum Master

Daily Scrum Meeting

Sprint Review

Finished Work

Sprint Retrospective

Source: Neon Rain Interactive – Agile For All
User Stories: “As a [user persona], I want [to perform this action] so that [I can accomplish this goal].”

The “what”

Story Points: estimate of effort to complete a certain story. *Not an estimate of time.* Typical methods of estimating: Fibonacci sequence, tee-shirt size from X-S (extra-small) to X-L (extra large)

*Important point: Size the story to complete within the sprint duration.*

Tasks: The specific actions that need to occur to complete the user story.

The “how”

As a doctor, I want to have the blood tests returned quickly and in a predictable manner so that I can determine the next course of action.

As a patient, I want to know what the course of action for the day is regarding my care so that I lessen my anxiety of what is to come.

As a hospital janitorial service, I want to make sure that the rooms are consistently cleaned and disinfected between patients so that transmission of disease is reduced.
Benefits of Scrum for the Team

- Teaming
- Learning and Improving
- Transparency
- Sense of Done
- Connection with the customer
- Rhythm
Benefits of Scrum for the Business / Enterprise

- Quickly adding value
- Able to respond to change
- Improved Customer relationships
- Lower Risk
- Faster Time to Market
- Better Quality
Case study: building a lean operating system

Environment: The R&D Lab has more work than ever before with the requirement for delivery at a pace not previously required. Narrow exposure to lean via lean six sigma (kaizen events) with limited sustained results.

Opportunity: Architect, develop and deploy a lean operating system in an R&D National Lab to increase effectiveness and efficiency of work, realizing more time spent on value-added tasks.

Why Agile Scrum?
- The problem is complex and known: Introduce lean to R&D so that we can realize more value-add of time spent.
- The solution is not known: There are many ways to realize value. Implementation via experimentation and “pilot lines” is appropriate.

Note: traditional lean six sigma practices do not work well in R&D. R&D needs to strategically embrace variation, not reduce it.
Example User Stories

Key activities include introducing and using tools and processes that reinforce lean thinking behaviors.

- tier boards, kanban boards, strategy deployment, knowledge briefs

As a Tier 4 manager, **I want** my team to reflect on our tier board experience **so that** I can make our time at the board more effective.

As a Product Manager for Gizmo, **I want** my entire team to have a 1 hr overview of the knowledge-brief and knowledge gap closing action process **so that** our product development can focus more on learning by closing knowledge gaps.

Tasks:
- Create standard reflection template for tier boards.
- Train board leaders on best way to use reflection template.
- Observe several tier sessions to get a good sample using template.

Tasks:
- Prepare 1 hr overview with relevant examples.
- Review content with key stakeholders to ensure it meets the needs. Build in iteration time.
- Dry run / practice overview so that it can be delivered in the allocated time and still provide time for questions.
- Schedule time to deliver presentation.
Results after ~ 18 months

- Stood up over **1000 tier boards** (every manager Tier 1 -5)
- Introduced **lean product development** methods (knowledge briefs) and using this on our latest products.
- Created, developed and delivered a **multi-day experiential workshop** to introduce lean concepts for R&D.
- Assisted in over **70 direct application projects** across the Lab in both technical and operational domains.
- Lean team demonstrated a **~24% increase in output**, as measured by user story points.

Incremental benefits realized in this multi-year journey
Agile Scrum is a Mindset, not an Activity

- **Doing Agile Scrum**
  - Ranked list of what is required: features, stories, ...
  - Innovation
  - Trusting relationships
  - ~20% benefit
  - Ability to manage changing priorities
  - Improved visibility to work
  - Increased productivity
  - Improved quality
  - Reduced risk

- **Being Agile Scrum**
  - Growth Mindset – looking toward future
  - ~3X benefit
  - Customer delighted
  - Joy of work
  - Strong team engagement
  - Time for innovation
  - Continuous learning
Further Resources

Scrum is being used well beyond software

Highly Recommend the following book:
*Scrum: The Art of doing twice the work in half the time* by Jeff Sutherland

Scaled Agile Framework: SAFe:
www.scaledagileframework.com

Check out their case study page – many examples.

Scrum Alliance
www.scrumalliance.org

There are others, several are very SW focused
12:00  Scott tee-up and framing
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Industry Practitioner Track

- Learn about Industry 4.0
- Expand and Extend my Network of Peers
- Accelerate my Career Progress and Success
- Get some Altitude on my life and job and career and have some Fun
- Learn about Service 4.0
- Operational Analytics
- Strengthen my Soft Skills

Use this link to Register

We set out to design something different for Practitioners

At the highest level, Performance Excellence is, as you know, all about Strategy, People, Process and Technology. So we kept it simple and practical.

We also know from our ‘voice of member and customer’ efforts that young professionals and early and mid-career professionals are interested in continued learning and development in the things to the right.

- Industry and Service 4.0
- Next Seven Habits of Highly Effective Young Professionals
- Positioning ISE to create the most value in organizations
- Transitioning from entry level engineer to manager to leader
- Smart Logistics and Supply Chain
- Smart Operational Analytics
- Integrated LeanSigma and Operational Analytics

Get that Promotion—IISE can help, this conference can help
We’ve put together a great ‘matrix’ of programming for Practitioners

**Sunday**

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<tr>
<th>Time</th>
<th>Subtrack IP</th>
<th>ST IP 1</th>
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<td>8:00-9:20</td>
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<td>9:30-10:45</td>
<td>Conference Keynote</td>
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<td>10:45-12:00</td>
<td>Executive Roundtable</td>
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<tr>
<td>11:30-12:20</td>
<td>TRACK Keynoter (Dave, CISE and Bob, IAB and YP Pres)</td>
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**Track Sub Focus**

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<tr>
<th>Time</th>
<th>Soft Skills Development</th>
<th>Career Directions and Trends</th>
<th>Making Most of and growing your ISE Foundation</th>
<th>Creating More Value in your organization</th>
</tr>
</thead>
<tbody>
<tr>
<td>12:30-1:50</td>
<td>YP—Next 7 Habits—Jared F., Matheus Scuta, Jess Grela</td>
<td>Industry 4.0—Jack Feng, Paul Cohen</td>
<td>Positioning and Leading the ISE Function—Steve Savoie, GM Jim, Disney</td>
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<tr>
<td>2:30-3:20</td>
<td>Making Magic: How Disney IE’s bring new experiences to life—Kaz</td>
<td>SSE Award Finalists—the Service Systems Engineering Slot—PSU We will know these in Feb.</td>
<td>ILSS &amp; Op Analytics YP Council Panel—Jess Grela, Cody Havaich, Matheus Scuta</td>
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<tr>
<td>3:30-4:50</td>
<td>Becoming a Change Master—Michael Giuliano</td>
<td>Smart Analytics—Jared F. (TPG), Vignesh Gundesha, Matheus Scuta (Ford)</td>
<td>What Managers Look for in Promoting ISE’s—Kaz, Erin Youngs, Felix Negron, Juan Perez, Derreck Waters</td>
<td>Covert IE’s in non-Traditional Roles—Sean G.</td>
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<td>5:30-6:30</td>
<td>Town Hall (YP and IAB) Placemat</td>
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<td>6:00-7:30</td>
<td>CISE Leadership Mixer (all Industry Participants invited and Student Chapter leaders)</td>
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**Monday**

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<td>11:15-12:30</td>
<td>TRACK Keynoter—I SE Thought Leader (Jim Tompkins)</td>
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<td>9:30-10:45</td>
<td>Outstanding Capstone Sr Design Finalist Panel—Elaine J</td>
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<td>8:00-9:20</td>
<td>How to App - Without Knowing Code—Karen C., Emily C., (Kaz)</td>
<td>Additive Manufacturing: Eliminating waste one layer at a time—Jeremy K.</td>
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Line-up of Speakers

- **Jim Tompkins**, Chairman and CEO, Tompkins International—Track Keynoter
  [https://www.linkedin.com/in/jimtompkins1/](https://www.linkedin.com/in/jimtompkins1/)

- **David Poirier**, President, The Poirier Group, Chairman of the Council on Industrial and Systems Engineering, and Incoming President-Elect, IISE
  [https://www.linkedin.com/in/poirierdavid/](https://www.linkedin.com/in/poirierdavid/)

- **Bob Pudlo**, VP Facilities and Technology Innovation, FedEx Ground, Chairman Industry Advisory Board IISE.
  [https://www.linkedin.com/in/bob-pudlo-2875a52a/](https://www.linkedin.com/in/bob-pudlo-2875a52a/)

- **Nathan Crabel**, Manager, West Monroe Partners, President the Young Professionals Group IISE.
  [https://www.linkedin.com/in/nathanrcrabel/](https://www.linkedin.com/in/nathanrcrabel/)

- **Paul Cohen**, Distinguished Professor, ISE at NCState.
  [https://www.ise.ncsu.edu/people/pcohen/](https://www.ise.ncsu.edu/people/pcohen/)

  [https://www.linkedin.com/in/drjackfeng/](https://www.linkedin.com/in/drjackfeng/)

  [https://www.linkedin.com/in/jim-dobson-5b213510/](https://www.linkedin.com/in/jim-dobson-5b213510/)

- **Steve Savoie**, Sr. Manager, IE Process & Integration, GM.
  [https://www.linkedin.com/in/steve-savoie-1456652a/](https://www.linkedin.com/in/steve-savoie-1456652a/)

- **Matheus Scuta**, Global Manufacturing Analytics Scientist, Ford.
  [https://www.linkedin.com/in/matheus-scuta-212253114/](https://www.linkedin.com/in/matheus-scuta-212253114/)

- **Cody Havaich**, Global Product Engineering Manager, Tempur Sealy.
  [https://www.linkedin.com/in/cody-havaich-aa452648/](https://www.linkedin.com/in/cody-havaich-aa452648/)

- **Sean Genovese**, IE Manager, Lockheed Martin.
  [https://www.linkedin.com/in/seangenovese/](https://www.linkedin.com/in/seangenovese/)

- **Kaz Takeda**, Disneyland Resort Manager, IE. Co-chair of this Track this year representing the Industry Advisory Board, IISE!!
  [https://www.linkedin.com/in/kaztheie/](https://www.linkedin.com/in/kaztheie/)

- **Benoit Montreuil**, Professor and Head of Physical Internet Center, Ga Tech.
  [https://www.linkedin.com/in/benoit-montreuil-a399213/](https://www.linkedin.com/in/benoit-montreuil-a399213/)

- **Elizabeth Gentry**, Director of Engineering Management and Professor, IE at Louisville.
  [https://www.linkedin.com/in/louisvilleliz/](https://www.linkedin.com/in/louisvilleliz/)
Line-up of Speakers


- **Jeromy Knapp**, Application Engineering Lab Manager, Stratasys. [https://www.linkedin.com/in/jeromy-knapp-742b2711/](https://www.linkedin.com/in/jeromy-knapp-742b2711/)


- **Elaine Johns**, President/CEO, EnerVision. [https://www.linkedin.com/in/elainejohns/](https://www.linkedin.com/in/elainejohns/)

- **Danny Faucette**, VP, IE and Process Improvement, Tindall. [https://www.linkedin.com/in/danny-faucette-a4819214/](https://www.linkedin.com/in/danny-faucette-a4819214/)


- **Jared Frederici**, Sr. Consultant, The Poirier Group. Co-Chair of this Track representing the Young Professionals Group, IIESE. [https://www.linkedin.com/in/jaredfrederici/](https://www.linkedin.com/in/jaredfrederici/)


- **Brittany Abraham**, Business Integration Manager, Disney Global HR [https://www.linkedin.com/in/brittany-abraham-988651139/](https://www.linkedin.com/in/brittany-abraham-988651139/)
Leadership Mixer

We also want to help you grow your personal and professional networks and what better way to do it than at an Annual, International Conference filled with ISE Peers from across many different Organizations. You can accelerate your high quality “LinkedIn’s” rapidly with our help!!

On Sunday evening, you’ll be invited to our Annual “Leadership Mixer” and after the first day of great professional development sessions be able to ‘mix and mingle’ 1on1 and in small groups.

The chart on left says higher effort higher value, we make it low effort and Higher Value by providing and facilitating the opportunity to meet great, successful talent in our field from across the World, literally.
So, First things First, take some time out and invest in yourself

It Pays Off—I’ve attended 30+ IISE Conferences and the Return on Investment has been 25+:1 !!!
Abstract:

- Agile methodologies were originally introduced with software in the mid-1990’s. Since then, the same thinking has been successfully used and quickly embraced in applications well beyond software. Agile is quickly growing in popularity because of the results demonstrated: more value-added work for the customer with less stress and increased employee satisfaction. As Industrial and System Engineers you are already familiar with lean and the benefits of systematically eliminating waste in pursuit of adding more value to the customer. Agile methodology and the several frameworks associated with it reinforce the benefits of working in incremental, iterative processes that fully embrace changing requirements from the customer. In this webcast, you will be introduced to Agile and one of the more popular frameworks used within it, scrum. Joan has used scrum in a variety of non-SW applications, most recently to introduce a lean operating system to a federally funded R&D center.

Working Outline:

- Chase for change: The “traditional method” – there has got to be a better way!
- Where did Agile / Scrum come from?
- There is a better way: constantly adding value for the customer when the goal is far away and not clear.
- The basic mechanics of scrum
- Scaled Agile Framework: unleashing multiple scrum teams to deliver very large breakthrough products quickly.
- How do I get started?
- Case study: Application in a non-SW environment