Announcing the 11th Annual Cohort of the INCOSE Technical Leadership Institute

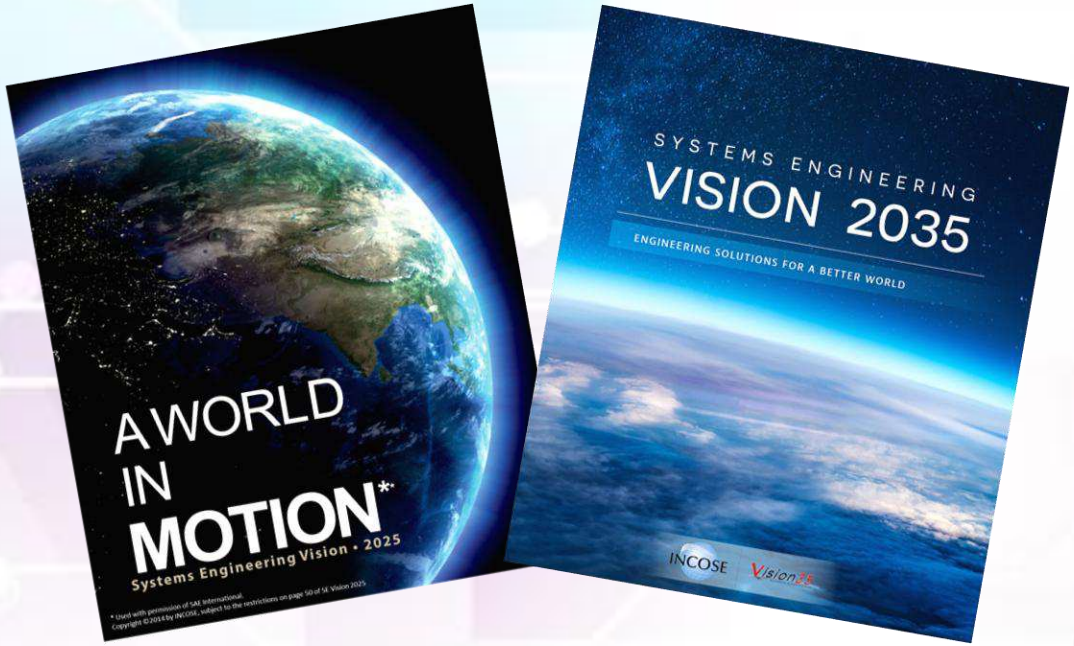
A global learning network of active INCOSE members seeking to improve their leadership skills in an open, collaborative environment

January 2025

Coaches David Long and Suja Joseph-Malherbe

The Foundations of the INCOSE Technical Leadership Institute (TLI)

Developing systems leaders equipped to address today's product, enterprise, and societal complexity



TLI Vision

- **Individual members** become more capable leaders and join an international network of systems engineering leaders
- **Sponsoring organizations** obtain non-proprietary, tuition-free technical leadership development for future SE leaders
- **INCOSE** has a growing pool of leaders to draw on and an enhanced international reputation for SE leadership

A Vibrant Global Footprint – 161 Leaders in 20 Countries

Now accepting nominations for members of Cohort 11 which will be conducted **virtually** with **no required costs** for participation

Nomination Package

Representative Kickoff Workshop 17-21 June 2024 (15 Hours)

Monday	Tuesday	Wednesday	Thursday	Friday
TLI Introduction and Workshop Kickoff Self-Aware Leader Leading through Influence Breakout Team Instructions	Breakout Teams	Breakout Team Reflection Complexity and Uncertainty Storytelling and Active Listening Breakout Team Instructions	Breakout Teams	Breakout Team Reflection Shared Model Building Introduction to Mentoring Embarking on a Learning Journey

Representative Q3 Workshop 13-17 January 2025 (15 Hours)

Monday	Tuesday	Wednesday	Thursday	Friday
Interpreting Your 360-Degree Feedback Your Learning Journey – Chapter 2 Understanding Cognitive Biases Breakout Team Instructions	Breakout Teams	Breakout Team Reflection Diversity, Equity, and Inclusion Shared Model Building as Sense-Making Breakout Team Instructions	Breakout Teams	Breakout Team Reflection Collaboration and Shared Exploration Your Learning Journey Continued

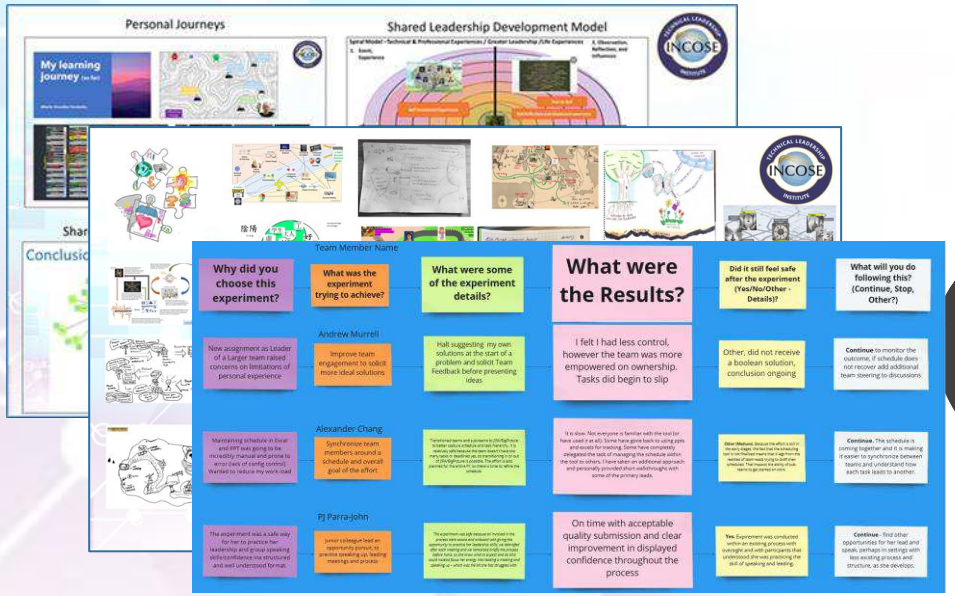
31 Mar 2025

Jun 2025

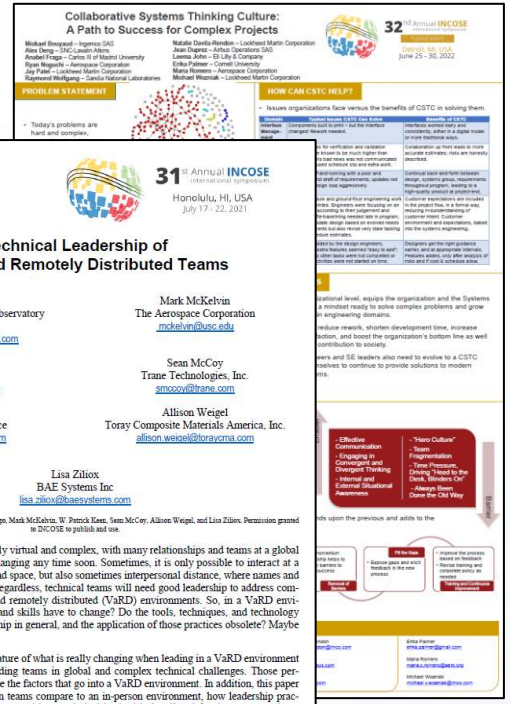
Jan 2026

Apr-Dec 2026

Jun 2027



Quarterly Projects (Individual and Collaborative)



Major Projects (Q4-Q6)

Induction as a Full Member of the Institute

A Continuing Through-Life Learning Journey

Nomination Package

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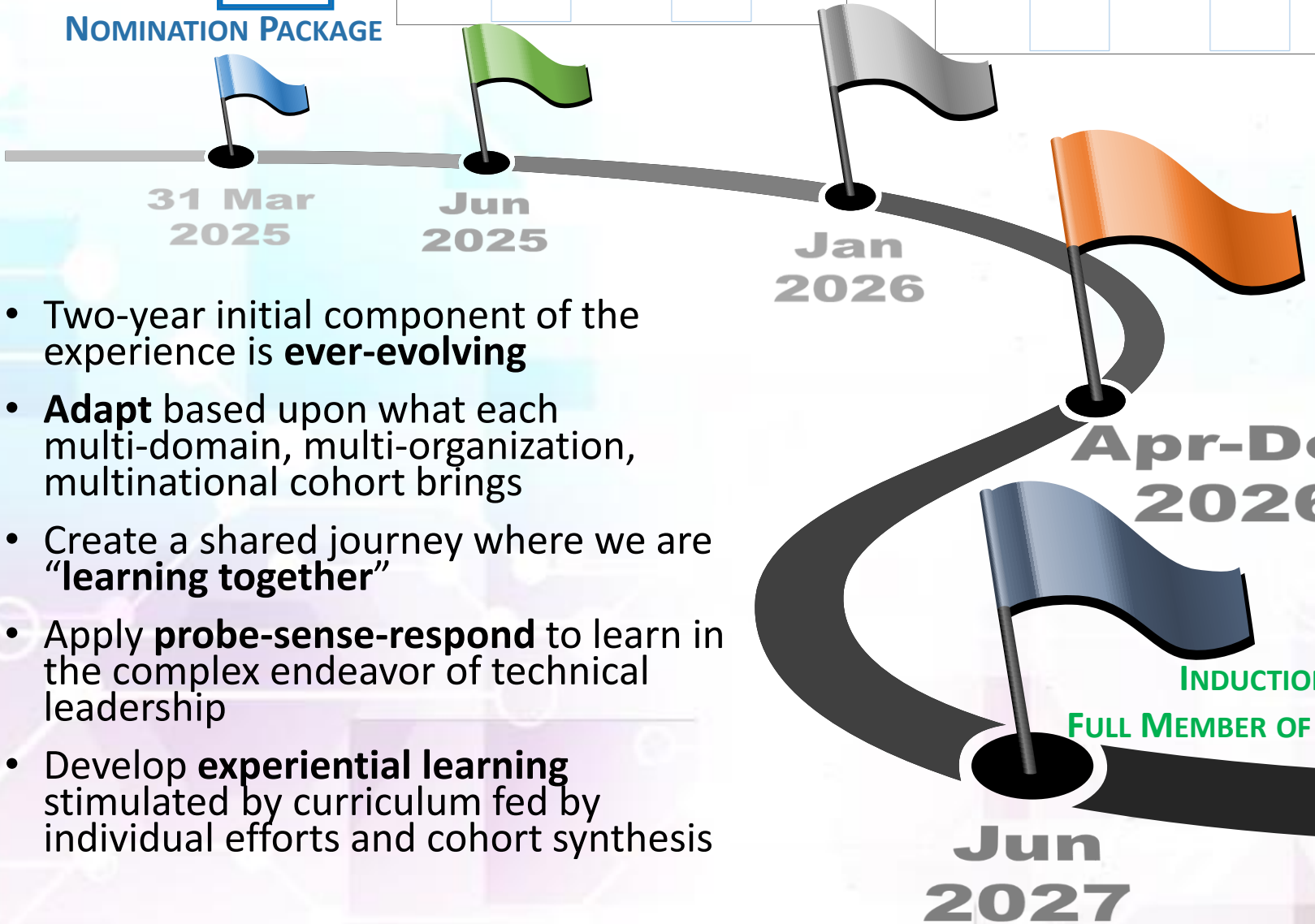
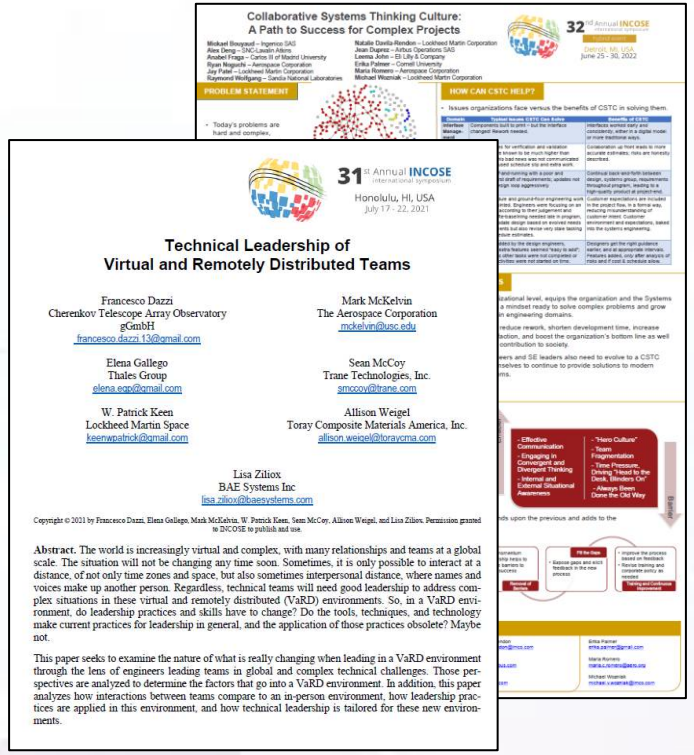


- Two-year initial component of the experience is **ever-evolving**
- **Adapt** based upon what each multi-domain, multi-organization, multinational cohort brings
- Create a shared journey where we are "**learning together**"
- Apply **probe-sense-respond** to learn in the complex endeavor of technical leadership
- Develop **experiential learning** stimulated by curriculum fed by individual efforts and cohort synthesis



Collaborative Systems Thinking Culture: A Path to Success for Complex Projects

31st Annual INCOSE International Symposium
Detroit, MI, USA
June 25 - 30, 2022

31st Annual INCOSE International Symposium
Honolulu, HI, USA
July 17 - 22, 2021

Technical Leadership of Virtual and Remotely Distributed Teams

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Abstract. The world is increasingly virtual and complex, with many relationships and teams at a global scale. The situation will not be changing any time soon. Sometimes, it is only possible to interact at a distance, of not only time zones and space, but also sometimes interpersonal distance, where names and voices make up another person. Regardless, technical teams will need good leadership to address complex situations in these virtual and remotely distributed (VaRD) environments. So, in a VaRD environment, do leadership practices and skills have to change? Do the tools, techniques, and technology make current practices for leadership in general, and the application of those practices obsolete? Maybe not.

This paper seeks to examine the nature of what is really changing when leading in a VaRD environment through the lens of engineers leading teams in global and complex technical challenges. Those perspectives are analyzed to determine the factors that go into a VaRD environment. In addition, this paper analyzes how interactions between teams compare to an in-person environment, how leadership practices are applied in this environment, and how technical leadership is tailored for these new environments.

Major Projects (Q4-Q6)

Induction as a Full Member of the Institute

A Continuing Through-Life Learning Journey

What Constitutes "Success"?

- Technical leadership development is a complex endeavor
  - Every individual's journey is different

    STARTING POINT ● NEEDS ● DESIRES ● PERSONAL CONTEXT ● ENVIRONMENT
- Coaches assess where each participant begins, guide them in clarifying their desired journey, and help them progress as far as they can
  - Self-awareness and growth
  - Communicating effectively
  - Fostering collaboration
  - Enabling others
  - Leading through influence
  - Operating within complexity and uncertainty
  - Leveraging diverse viewpoints and skills
  - Thinking holistically and strategically
  - Advancing leadership concepts
  - Owning their learning journey

Coaches assess and encourage engagement, contributions, and constructive approaches.
Coaches do not grade, compare, or evaluate participants.

Several Ball Aerospace team members have participated in the TLI cohorts. These participants have been able to take lessons learned through the TLI and quickly apply the skills into a real-world setting, which benefits our customers, leadership and fellow team members.

Erik Wilkinson
Chief Systems Engineer
BAE Space & Mission Systems

It's easy to say that TLI helps with networking and reflections on your journey to help you grow as a leader. And this is all true, but TLI is more than that for me. It is a safe harbor. It is a foundation. There are not only times of doubt in a leadership journey - where you question, 'can I really do this?' - but there are also critical tipping points, conflict and all kinds of other messy things that happen along the way. TLI provides a space that supports you when things get messy.

Erika Palmer
Head of Technical Products and Services
INCOSE
TLI Cohort 6

Col (ret) Tim West
US Air Force Research Laboratory
TLI Cohort 7

I share TLI's belief that leadership, like engineering skills, must be crafted and honed. I personally applied for TLI because I am convinced that even after a successful 30-year career in the US Air Force leading the development of the weapon systems of tomorrow, I still have much to learn about leadership – and much to share with my fellow cohort members. I have especially enjoyed the opportunity to share ideas and experiences from those in other industry sectors and other countries so that we can mutually develop more diverse, robust, and inclusive leadership skills.

Nomination Process

Applicants must be ***nominated by an INCOSE leader*** and then submit a package that includes

- **Nominating letter** from an INCOSE Board Member, Director, Associate or Assistant Director, Chapter President, or member of the Corporate Advisory Board
- **Letter of recommendation and support** from the candidate's home organization, including acknowledgement of the commitments of the initial two-year experience
- **Personal statement** describing the expected benefits to the candidate, his or her organization, and INCOSE
- **Resume** describing positions held and specific systems engineering accomplishments

Packages for Cohort 11 are due **31 March 2025**

Nomination Criteria

Nominees should have at least 3 years of professional experience (5+ preferred) in order to have the experiential basis to benefit from the cohort-based exploration and learning

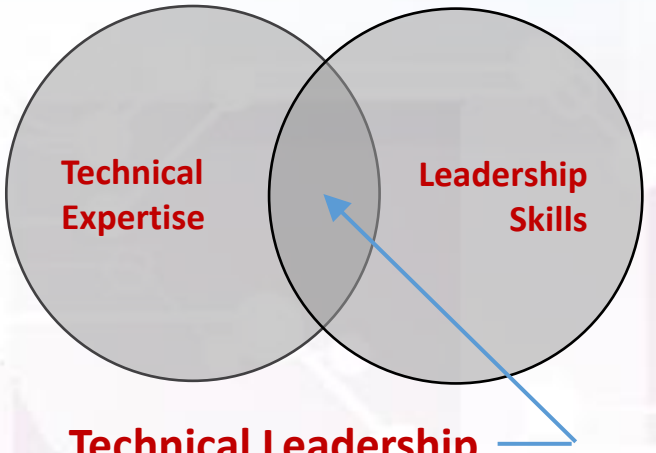
Nominees should be chosen based on

- Proven aptitude in both systems engineering and technical leadership
- Comfort working in an uncertain world and ability to tackle wicked, messy problems
- Demonstrated interest in and commitment to enhancing personal technical leadership
- Potential for assuming positions of greater leadership in the future

Nominating letters should describe a *specific instance* in which the candidate has demonstrated one or more of the following behaviors*

- Held the vision
- Thought strategically
- Fostered collaboration
- Communicated effectively
- Enabled others to be successful
- Demonstrated emotional intelligence

The clear framing of this specific instance is a key component of the package and is weighted accordingly during the evaluation process



*Behaviors are more fully described the Appendix

Nomination Process

- Nominating letters should be sent both to the nominee and to *nominations@incose.net*
- Chapter Presidents are asked to limit themselves to **no more than 4 nominees** for a given cohort to help maintain global diversity of the cohort
- Once nominated, participants are required to assemble an application package that includes
  - **Nominating letter** describing a **specific instance** in which the candidate has demonstrated one of the six identified leadership behaviors
  - **Letter of recommendation and support** from the candidate's home organization
  - **Personal statement** describing the **expected benefits** to the candidate, his or her organization, and INCOSE
  - **Resume** describing positions held and specific systems engineering accomplishments
- The evaluation team considers all aspects of the nomination with particular weight given to the nominating letter and the personal statement

Completed application packages should be zipped and e-mailed to *nominations@incose.net* no later than **31 March**

Submitters will receive an acknowledgement of their submission within 2 business days. If they do not, they should follow up with *nominations@incose.net* and *david.long@incose.net* to ensure their package has been received.

The TLI Coaches would be happy to speak at an upcoming event or otherwise answer any questions you or your members might have

For more information,
visit www.incose.org/learn/tli
or contact *david.long@incose.net*

An information package will also be provided:

Presentation Slides

Instructions for Applicants

What Benefits Can I Expect?

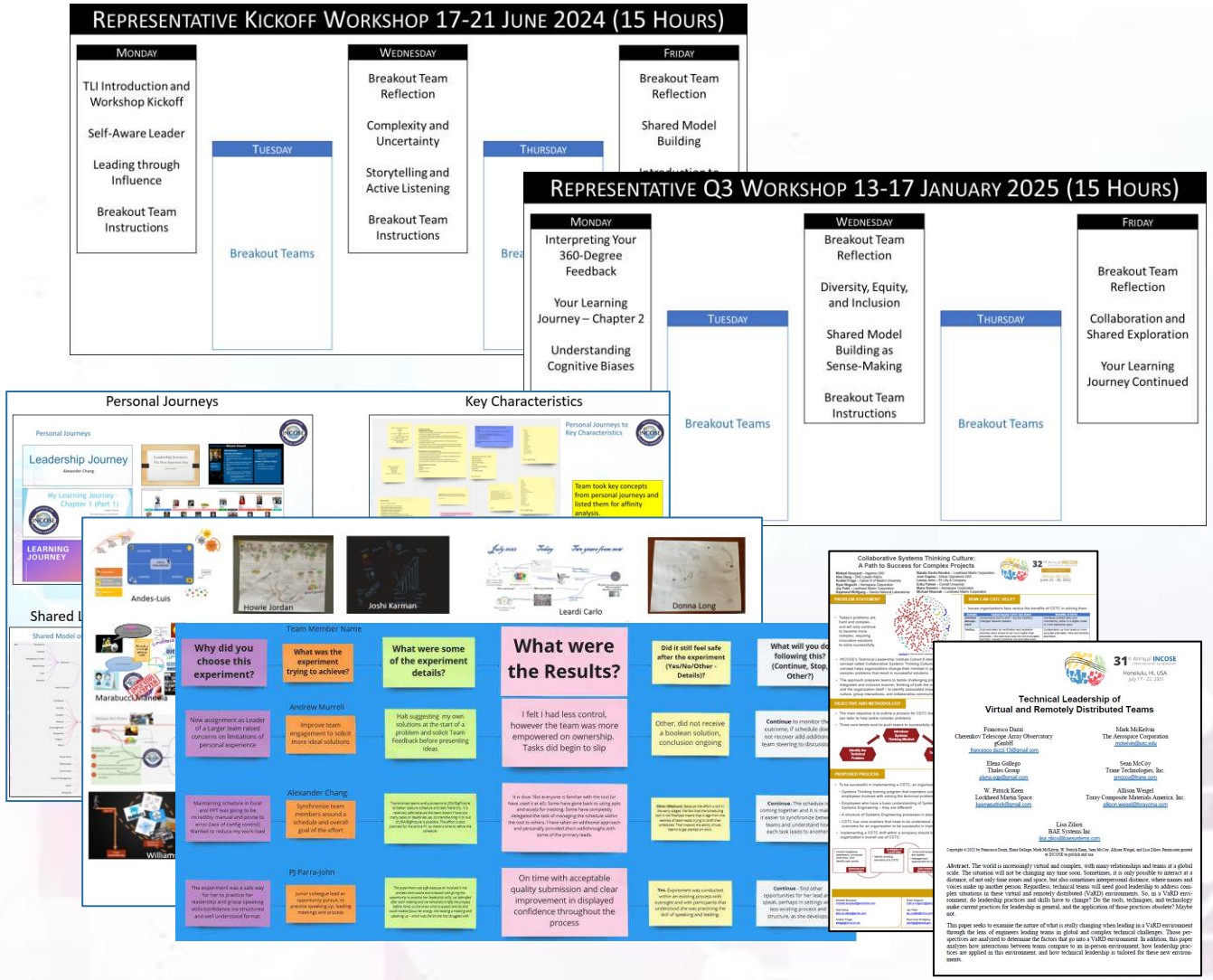
Frequently Asked Questions

Frequently Asked Questions

What differentiates the Technical Leadership Institute from other leadership programs?

- Two-year structured component of the experience is **ever-evolving**
- **Adapt** based upon what each multi-domain, multi-organization, multinational cohort brings
- Create a shared journey where we are **“learning together”**
- Apply **probe-sense-respond** to learn in the complex endeavor of technical leadership
- Develop **experiential learning** stimulated by curriculum fed by individual efforts and cohort synthesis
- **Complements** but does not replace, MBA programs, corporate leadership development, or management training

More Contributions ⟶ More Benefits!



How much will participation in the INCOSE Technical Leadership Institute cost?

There are **no required costs** for participation in the Technical Leadership Institute

- The Institute charges **no tuition** with coaches donating their time and workshop materials provided free of charge
- All Cohort 11 workshops will be delivered virtually, so **no travel costs** will be required
- Additional collaboration utilizes remote collaboration tools at **no cost** to the participants

Participants are **encouraged** to participate in at least one IS or IW during the initial two-year experience to meet with their TLI colleagues and broaden their connections across INCOSE

- Participation in IS/IW requires normal member registration fees and travel and living costs to the venue when participating in person

How much time is required for participation in the Technical Leadership Institute?

- Participants are required to participate in approximately **40 hours of scheduled online activities in year one** and **20 hours in year two**
- Participants are also expected to invest additional time working on **individual and team projects** throughout the initial two-year experience
  - Time spent on projects is scheduled at the discretion of the participants
  - The more time and energy participants invest in projects, the more benefit they derive
  - Actual time invested varies from a few hours per week to several hours per month
- Participants are encouraged to participate in **one IS or IW** during the initial two-year experience
- Time investment in the TLI beyond the initial two-year experience is at the discretion of the individual as they participate in topical engagements and projects based upon their interests and objectives
- Participants are expected to put what they learn into practice full time, in their jobs, in their professional activities, and in their private lives. **Leadership is best learned through practice!**

What should participants in the INCOSE Technical Leadership Institute expect to learn?

- Topics covered during workshops include becoming a self-aware leader, leading in the presence of complexity and uncertainty, visioning, leading through influence, leveraging and being a mentor, seeking and responding to feedback, understanding cognitive biases, intercultural communications, storytelling, active listening, etc.
- While modules such as these are addressed, the Technical Leadership Institute is **not a training program**. Participants primarily learn through a series of experiences designed to stretch them as leaders and encourage exploration, observation, and reflection in the process.
- Throughout the initial two-year experience, participants are provided with opportunities to discuss their observations and learning not only with coaches but also with others in their own cohort and in other cohorts. Learning from this global network of emerging leaders is perhaps the greatest benefit of participation and has given rise to the Institute tagline **Learning Together**.

What contributions have members of the Technical Leadership Institute made to date?

- Built a Technical Leadership Model and presented it at IS 2016
- Conducted a technical leadership model “World Café” discussion at IS 2016
- Conducted a panel discussion on Leadership and Management at IS 2017
- Conducted a workshop on Intercultural Communications at IW 2018
- Presented a paper entitled “Experiments in Leading through Influence: Reflections from a Group of Emerging Technical Leaders” at IS 2020
- Presented a paper entitled “Technical Leadership of Virtual and Remotely Distributed Teams” at IS 2021
- Presented a paper entitled “Collaborative Systems Thinking Culture: A Path to Success for Complex Projects” at IS 2022
- Presented posters entitled “A Systems View of Career Development for Systems Engineering Leadership” and “Future Trends Influencing Technical Leaders and Technical Leadership”at IS 2023
- Presented poster entitled “Leading in Uncertainty: A Framework to Improve Performance” at IS 2023
- Created proficiency level descriptions for the Professional Category in the INCOSE Competency Framework
- Developed a sustainable model for the Technical Leadership Institute
- **Assumed leadership positions on the INCOSE Board of Directors; at technical, sector, and chapter levels; and within their organizations**

Appendix:
Systems Engineering Technical Leadership Model

Nominating Letter Requirement

Describe a *specific instance* in which the nominee has demonstrated one or more of the following:

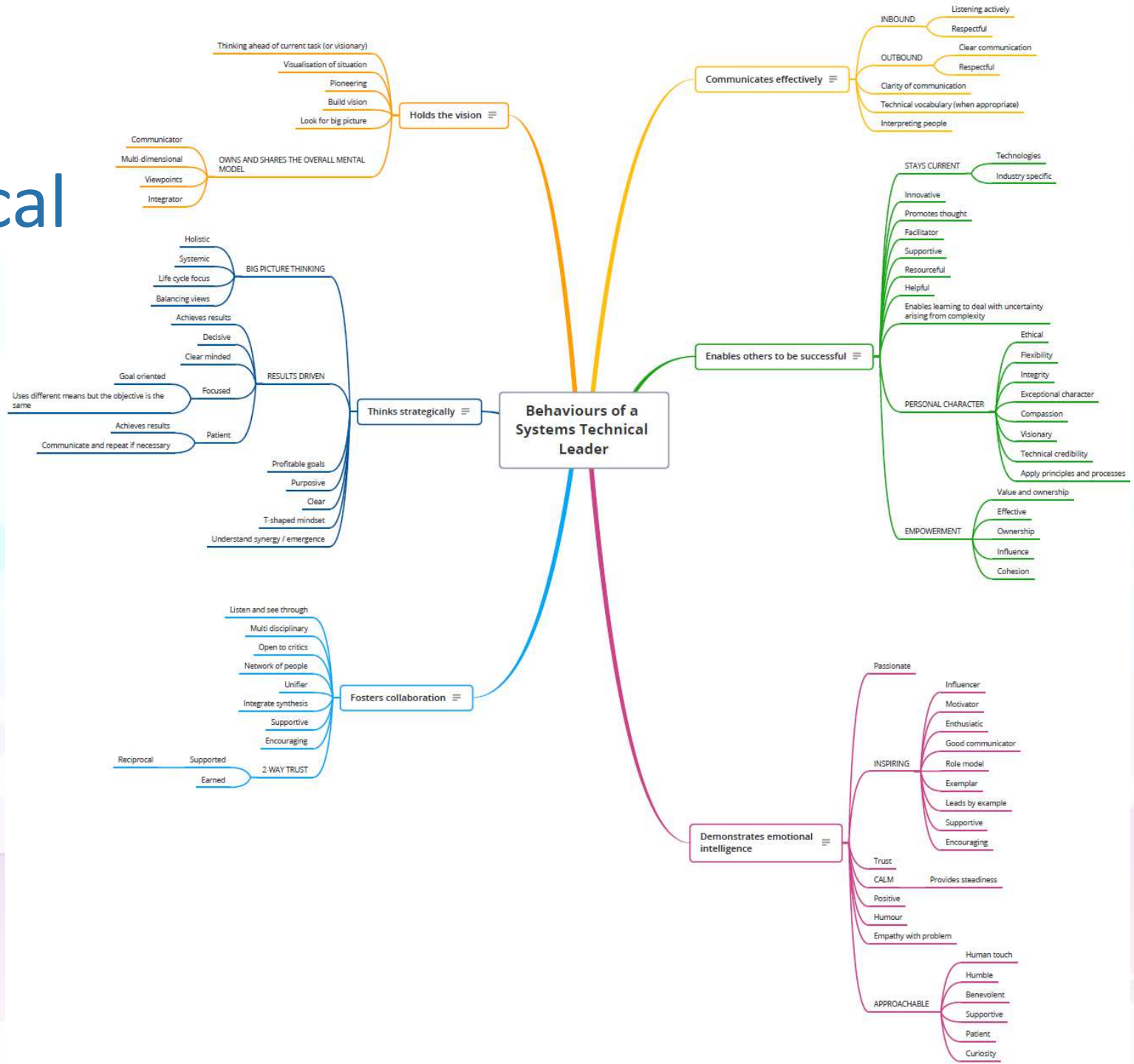
- Held the vision
- Thought strategically
- Fostered collaboration
- Communicated effectively
- Enabled others to be successful
- Demonstrated emotional intelligence

SE Technical Leadership Model

Ref: Godfrey, Building a Technical Leadership Model, Invited Paper, IS 2016

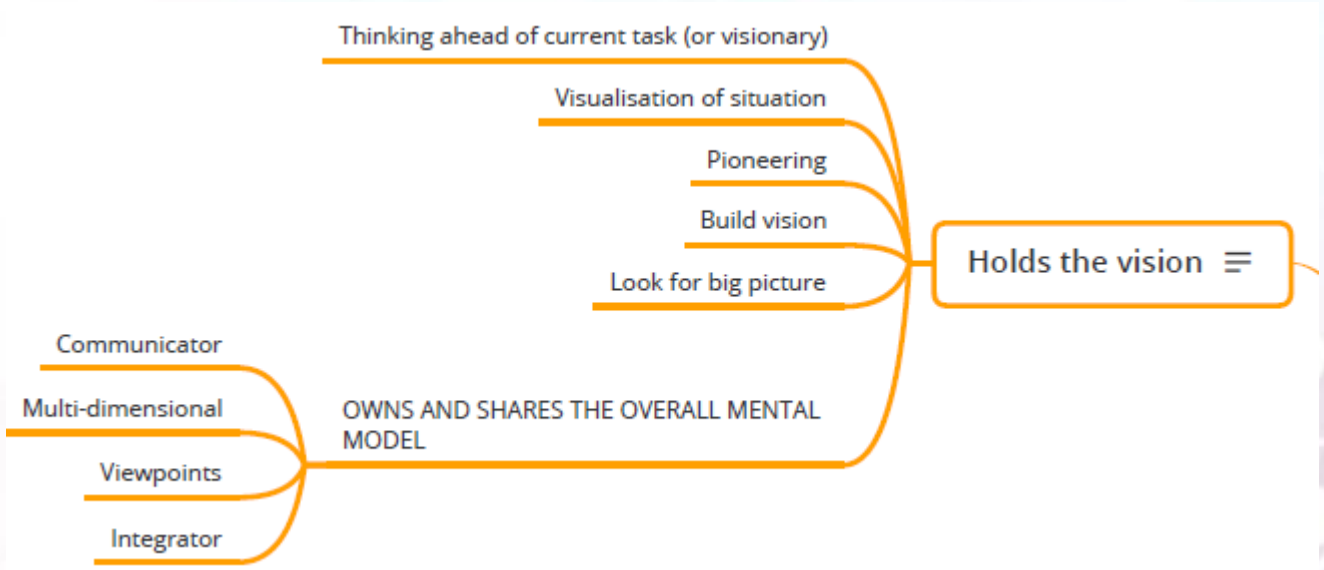
- **What:** A shared INCOSE leadership model
- **Who:** Developed as a collaborative learning initiative by the first cohort of the INCOSE Institute
- **Why:** Provides a cohort definition of systems technical leadership in their engineering environment
- **How:** "Being a systems technical leader" is defined by six interdependent branches of a mind map
  - Each branch is elaborated in the following slides

Behaviors of a Systems Technical Leader



Holding the Vision

A vision is an aspirational statement that defines who we are and where we want to go. It provides an impelling purpose that energizes people to do more than they thought they could or would. To accomplish this, however, a vision must be more than just a statement posted on the wall. It must be the start of a continual and ongoing conversation that we, as systems engineers, are well positioned to support, reinforce and encourage.



Attributes of a TLI Leader from Cohort 1 shared model

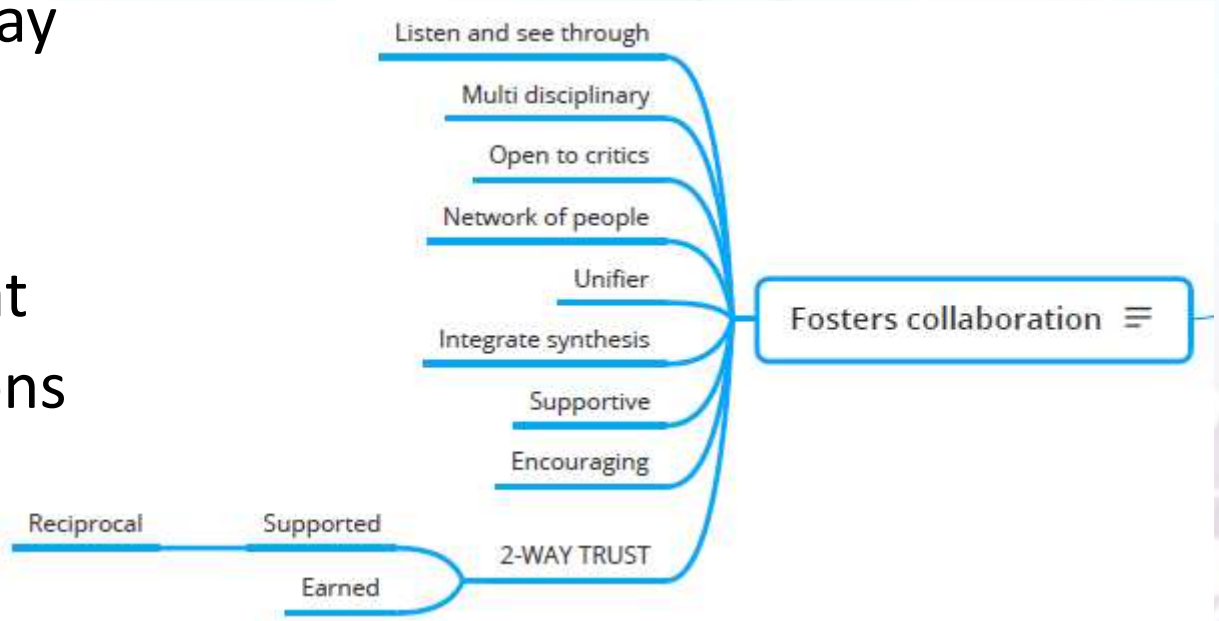
Thinking Strategically

Strategic thinking is long term, rather than short-term, tactical thinking. It must be continuous and ongoing, not a one-time, up-front event. We formulate a hypothesis before taking action, treat the action as an experiment to test the hypothesis, and based on the results we observe, we continue along the path we started or formulate a new hypothesis and begin the testing anew. This is the scientific method applied to everything we do.

Attributes of a TLI Leader from Cohort 1 shared model

Fostering Collaboration

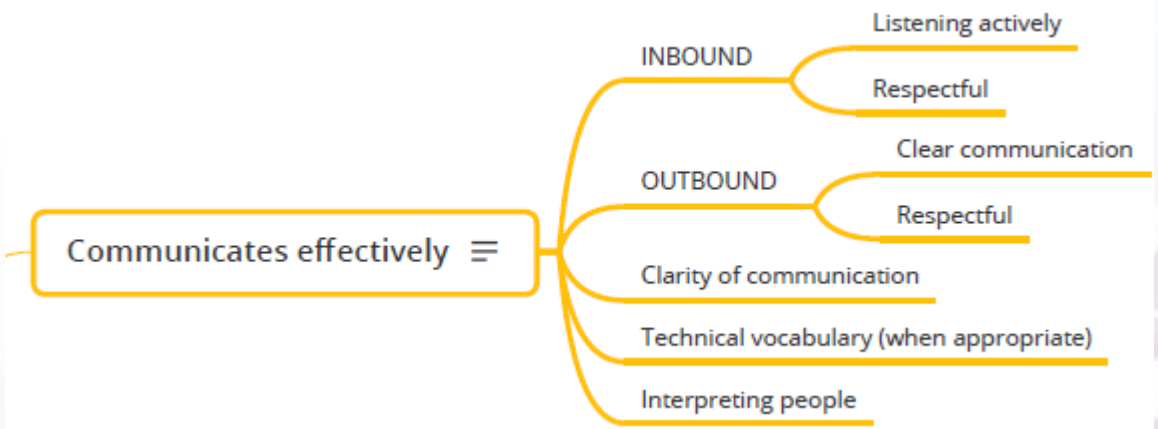
Complex problems cannot be resolved by individuals working alone; their resolution requires the efforts of many. Individual contributions must be woven together into a collective enterprise for which success means success of the whole, not of the individual parts. This enterprise represents a vast social network and systems engineers play a vital role in building, maintaining and strengthening these networks. Our goal should be to foster not just tradeoffs that compromise between competing positions but collaboration that allows new ideas to emerge through creative conflict and experimentation.



Attributes of a TLI Leader from Cohort 1 shared model

Communicating Effectively

Often when people seek to improve their communication skills, they begin tweaking their “transmitters.” But effective communication is not just about speaking it is also about listening. We need to improve our “receivers.” Good listening requires attention to the content being spoken and the emotion with which it is communicated. We have to learn the language of those we seek to influence and speak to them in words they understand.



Attributes of a TLI Leader from Cohort 1 shared model

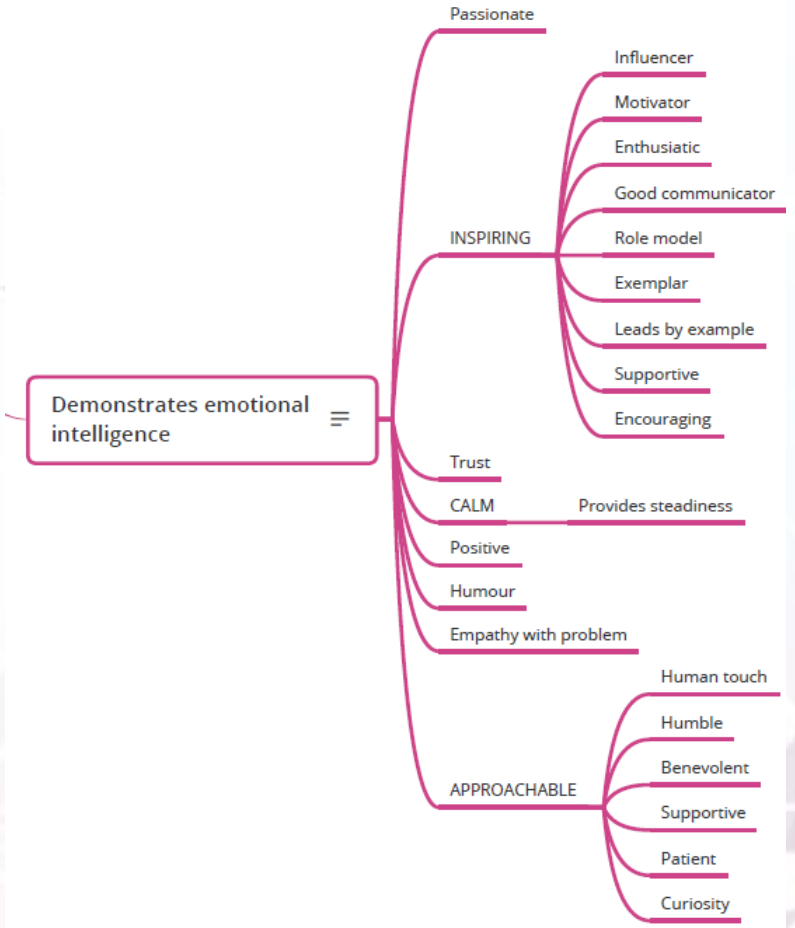
Enabling Others to Be Successful

Since systems engineers must lead through influence, the results we seek to achieve will necessarily be accomplished by others. Our role is to influence, guide, encourage and support those who are in a position to produce those results. This requires a sense of humility and a deep respect those we seek to lead. We must trust in their abilities, and in their capacity to learn through discovery not lecture. Our success will derive from their success and their acknowledgement that we contributed to it.

Attributes of a TLI Leader from Cohort 1 shared model

Demonstrating Emotional Intelligence

In order to lead, we must first understand ourselves, the differences between ourselves and others. Unless we recognize and understand these differences, we risk talking past others or causing them to reject our input. We must continually seek feedback to decrease our blind spots and be willing to reveal things that help others know us better. While the former can make us uncomfortable, and the latter more vulnerable, the payoff will be more than worth the effort.



Attributes of a TLI Leader
from Cohort 1 shared model