

# Setting the Stage for Successful Convergence Research

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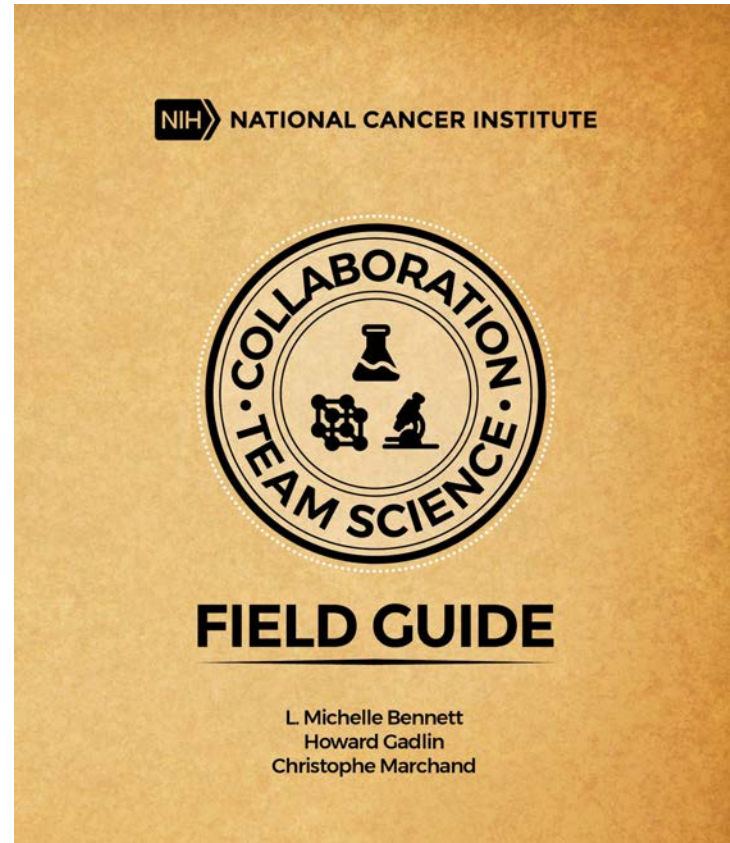
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*Chief Innovation Officer,  
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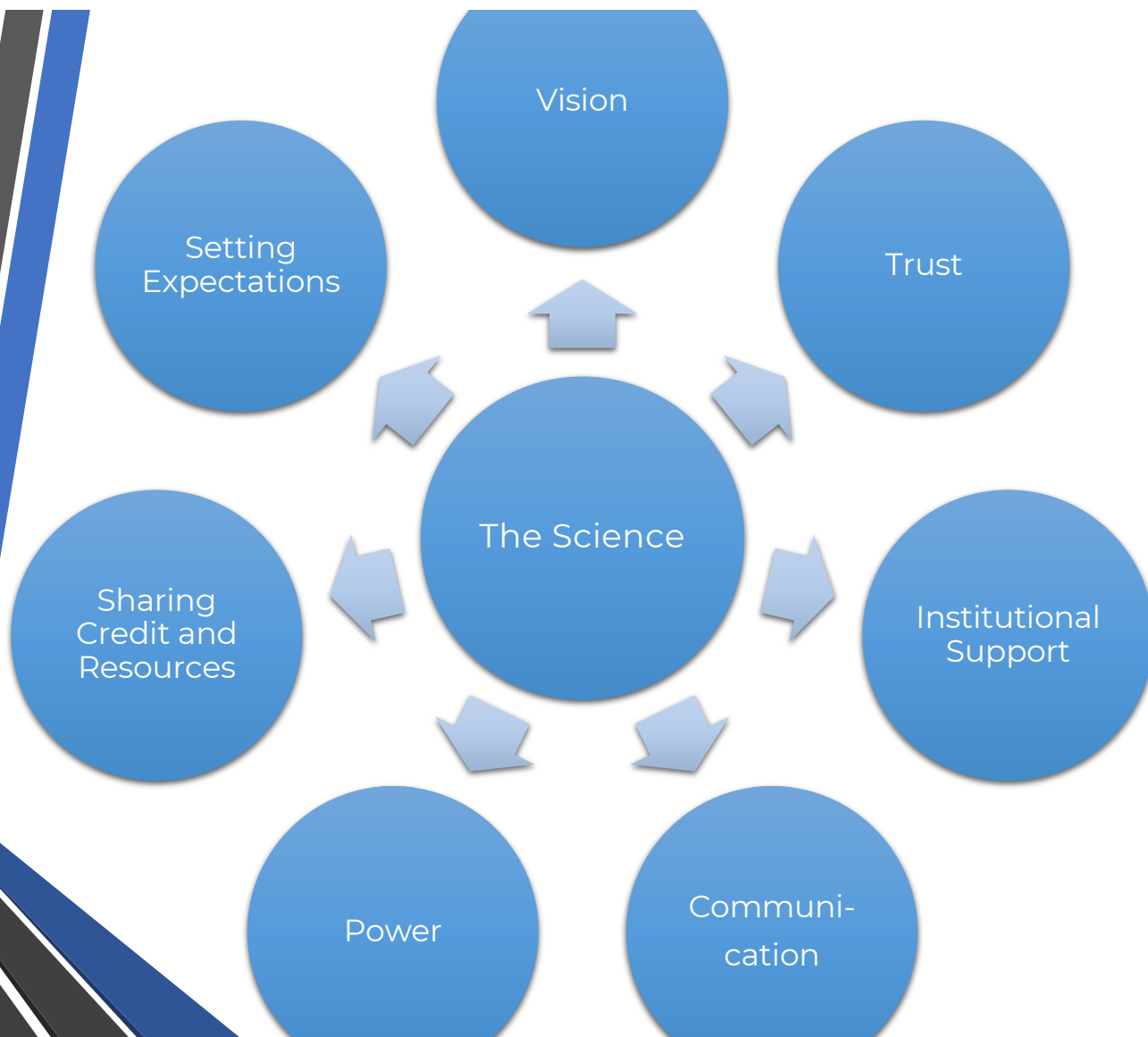
NSF ERC Planning Grant Workshop – *Sept 27, 2021*

# What Characteristics Contribute to Successful Team Functioning?



[teamscience.nih.gov](https://teamscience.nih.gov)

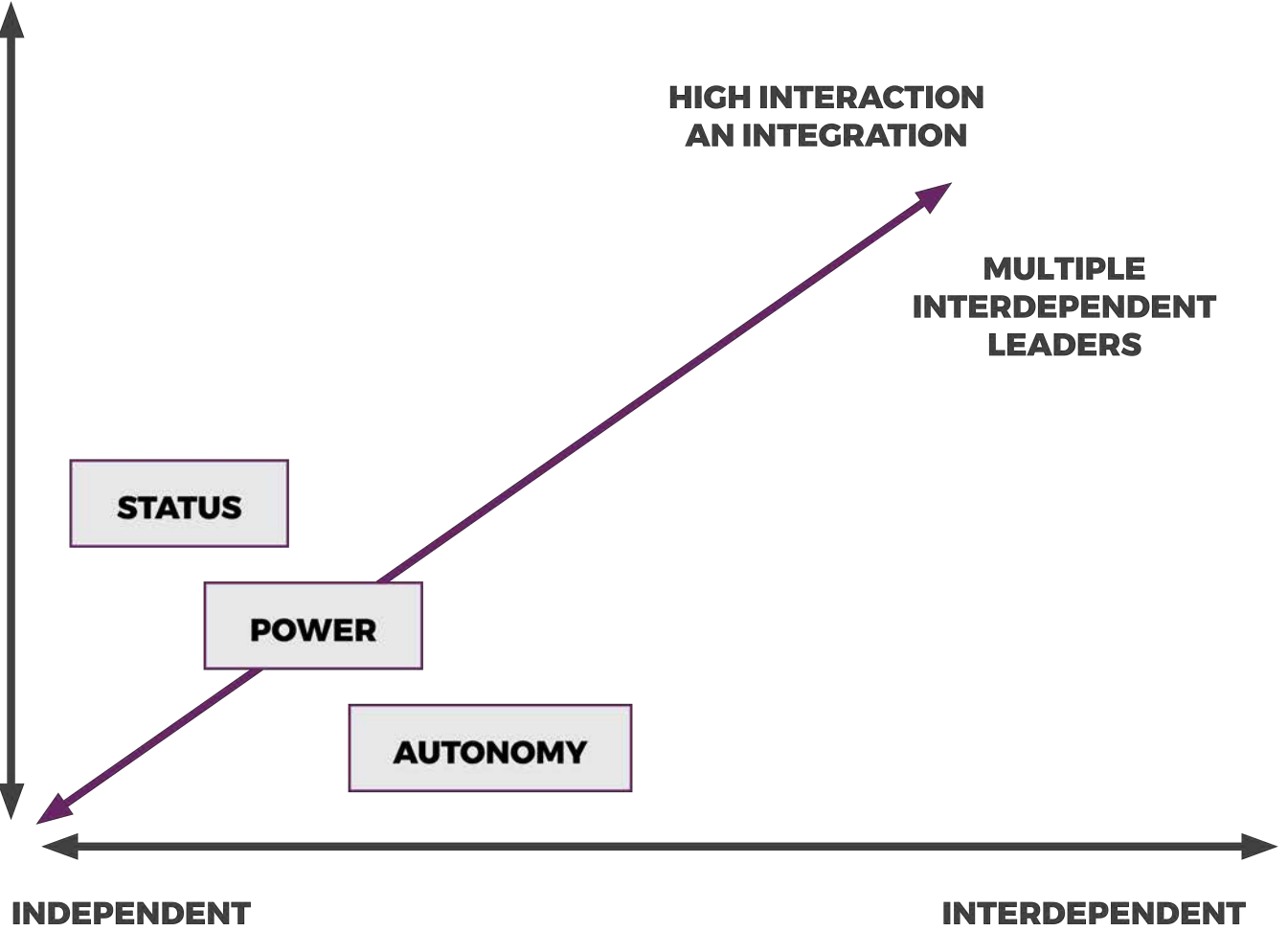
Science  
brings  
teams  
together....



Collaboration  
Introduces  
Threats

**GROUP  
IDENTITY**

**SELF  
IDENTITY**



# Research Proposal Requirements...

## Scientific Research Plan

- Acknowledgement of the complex nature of the scientific challenge
  - Intro, background, research plan, etc...

## Collaboration Plan

- Providing information that enables the reviewers to understand:
  - Team Dynamics and Management
  - Training and mentoring philosophy in an era of team science
  - Leadership characteristics

# Scientific Review: Team Science Expert

- Team member identification
  - Scientific background/expertise
  - Interests/motivations/“interviews”
- Team building and management
  - Establishing Trust
  - Setting Expectations
  - Team Development
- Effective leadership
  - Shared Vision
  - Research Plan
- Interdisciplinary/Transdisciplinary /Convergent
  - Disciplinary backgrounds relevant to complexity of the problem
- Engagement of community
  - Authentic?
- Communication skills
  - Internal/external
  - Managing conflict and promoting disagreement

*Note: together this information could establish a collaboration plan/agreement\**

# Team Formation: Descriptions in Grant Proposal

- a) Once I am funded, I will form the team. I will be the leader. I will outline the goals and objectives, and will give the team explicit directions in order to successfully achieve the goals and objectives of this project.
- b) The team is well established. We have been working together for years and are very comfortable together.
- c) I have reached beyond my comfort zone and identified individuals who are also interested in this complex problem. They represent a variety of disciplines ranging from close to the science, to expertise in the technological methods, to community level responsibilities.



Let's Explore....

Shared Vision

Establishing Trust

Setting Expectations

Team Development

Gift Giving

Diversity

Communicating

Effective Leadership



# Shared Vision/Goal

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- Key to successful leadership
- Sets the course for the team members to travel
- Improves group effectiveness
- Should be revisited regularly with the team





# Trust

[https://commons.wikimedia.org/wiki/File:Circus\\_Smirkus\\_-\\_Static\\_Trapeze.jpg](https://commons.wikimedia.org/wiki/File:Circus_Smirkus_-_Static_Trapeze.jpg)

# Tools for Setting Expectations

[and creating  
a scaffold for  
building  
trust]

## Collaborative Agreement

- Jointly created agreement among collaborators: can be formal or informal in its creation

## “Welcome Letter”

- A scaffold for building deeper trust including: expectations and conflict

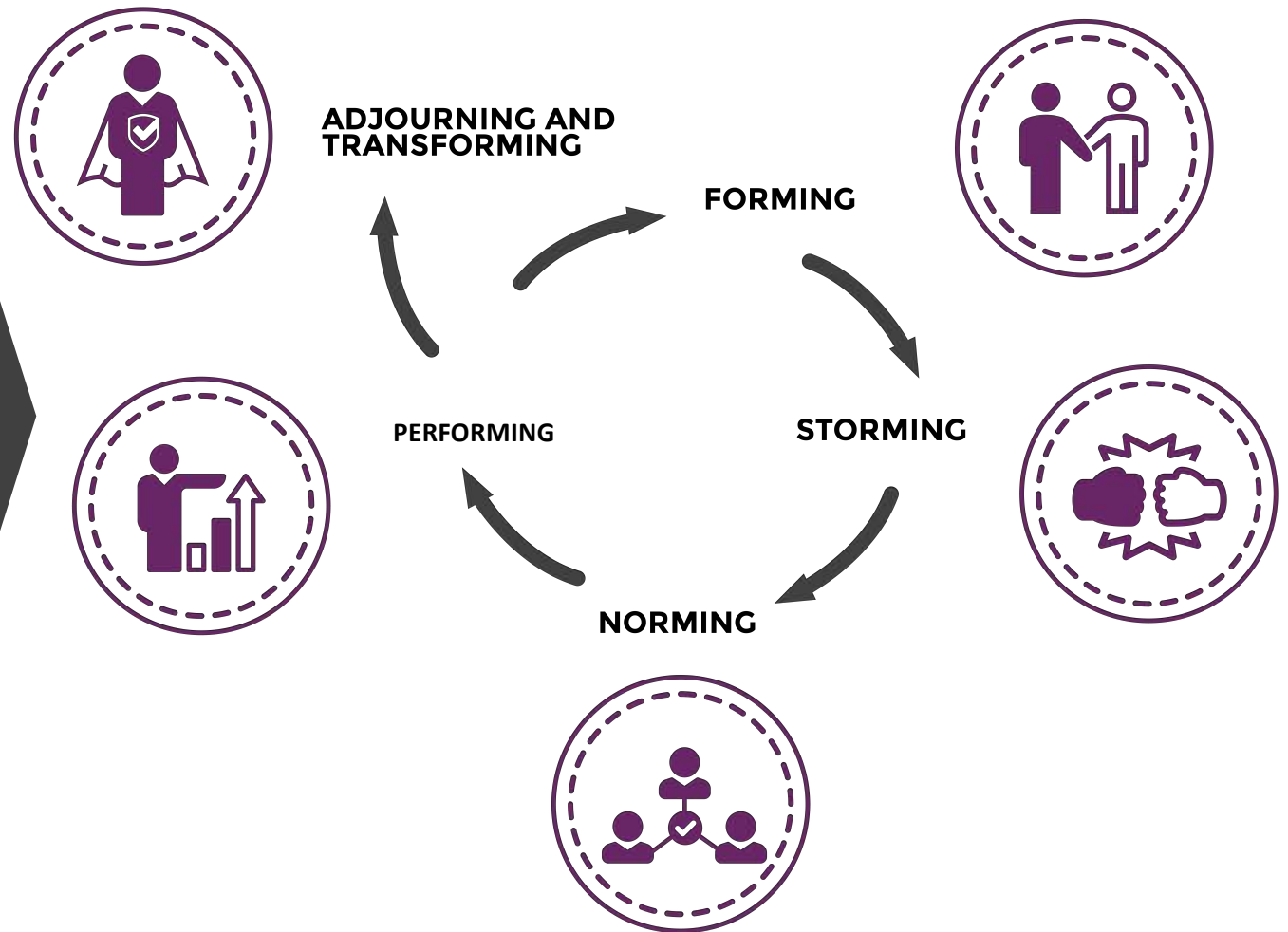
## Institutional Agreements

- Language in an offer letter or pre-tenure agreement
- Joint appointment agreements

## Consortium Agreements

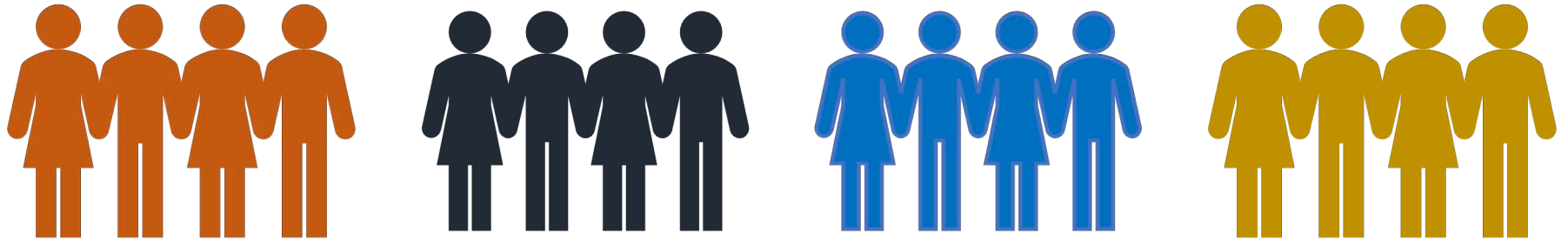
- Biospecimen collection/use; Publications; Data storage and sharing; etc..

# Model of Team Development



“The greater the proportion of experts a team had, the more likely it was to disintegrate into nonproductive conflict or stalemate.”

Gratton and Erickson,  
HBR, November 2007  
<https://hbr.org/2007/11/eight-ways-to-build-collaborative-teams>



What about diversity?

## Team Science is an Exercise in Diversity

- Different perspectives
- Varied experiences
- Range of expertise
- Challenging methodologies/approaches
- Questioning interpretations, results, etc...



## More Women: Smarter Teams

“There is little correlation between a group’s collective intelligence and the IQs of its individual members. But if a group includes more women, its collective intelligence rises.”

Anita Woolley and Thomas Malone, HBR, June 2011



BUSINESS | MANAGEMENT | MANAGEMENT & CAREERS

# California Becomes First State to Mandate Female Board Directors

Law could run into legal challenges; opponents say legislation runs afoul of constitutional principles

By *Vanessa Fuhrmans*

Updated Sept. 30, 2018 6:13 p.m. ET

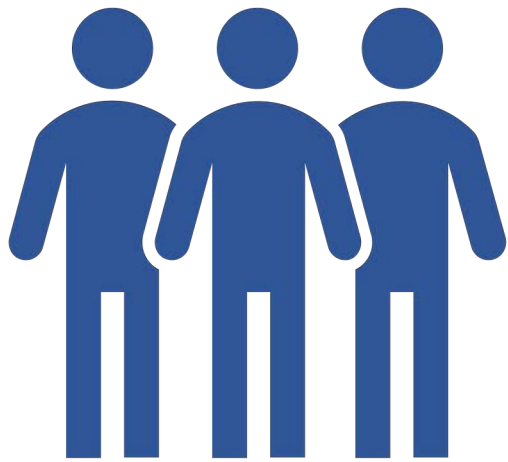
California became the first state to require companies based within its borders to put female directors on their boards, adding to pressure on boardrooms across the country to give more women a seat at the table.

California Gov. Jerry Brown on Sunday signed a bill mandating that all publicly traded companies with headquarters in the state have at least one woman on their boards by the end of next year. By 2021, companies with at least five directors would need to have two or

# Diversity and a Tech Team

- Diverse perspectives are critical
- If tech teams aren't diverse, innovation is at risk
- Technology development is for everyone
- Diversifying tech teams makes stronger products as well as strategies to recruit diverse techies
- Consider HP's fiasco with regard to its facial recognition software

[Facial Recognition and HP](#)



You can't listen...  
if people won't  
speak up

- Case Study: Adopting a new technology in a clinical procedure room

# Mutual Learning Approach

## Values

Transparency

Curiosity

Informed Choice

Accountability

Compassion

## Assumptions

I have information, so do other people

Each of us sees things others don't

People may disagree with me & have pure motives

Differences are opportunities for learning

I may be contributing to the problem

Based on work by  
Roger Schwarz  
and Associates



What do Gift  
Giving and  
Team Science  
have in  
Common?



## Ideas as Gifts

- When someone shares an idea, they are sharing a gift
- Think of an idea as a gift/present for you
- What can be done with that gift?

# Possible Reactions



- “That’s a bad idea.”
- “How are you going to do that?”
- “Sure/that’s interesting, BUT .... “
  - I have a better idea; it will never work; the group won’t like it; etc...
  - *However...* Is a fancy BUT
- Thank-you, AND....
  - Terrific, let me build on that idea ...

## Thank-you, *and*...



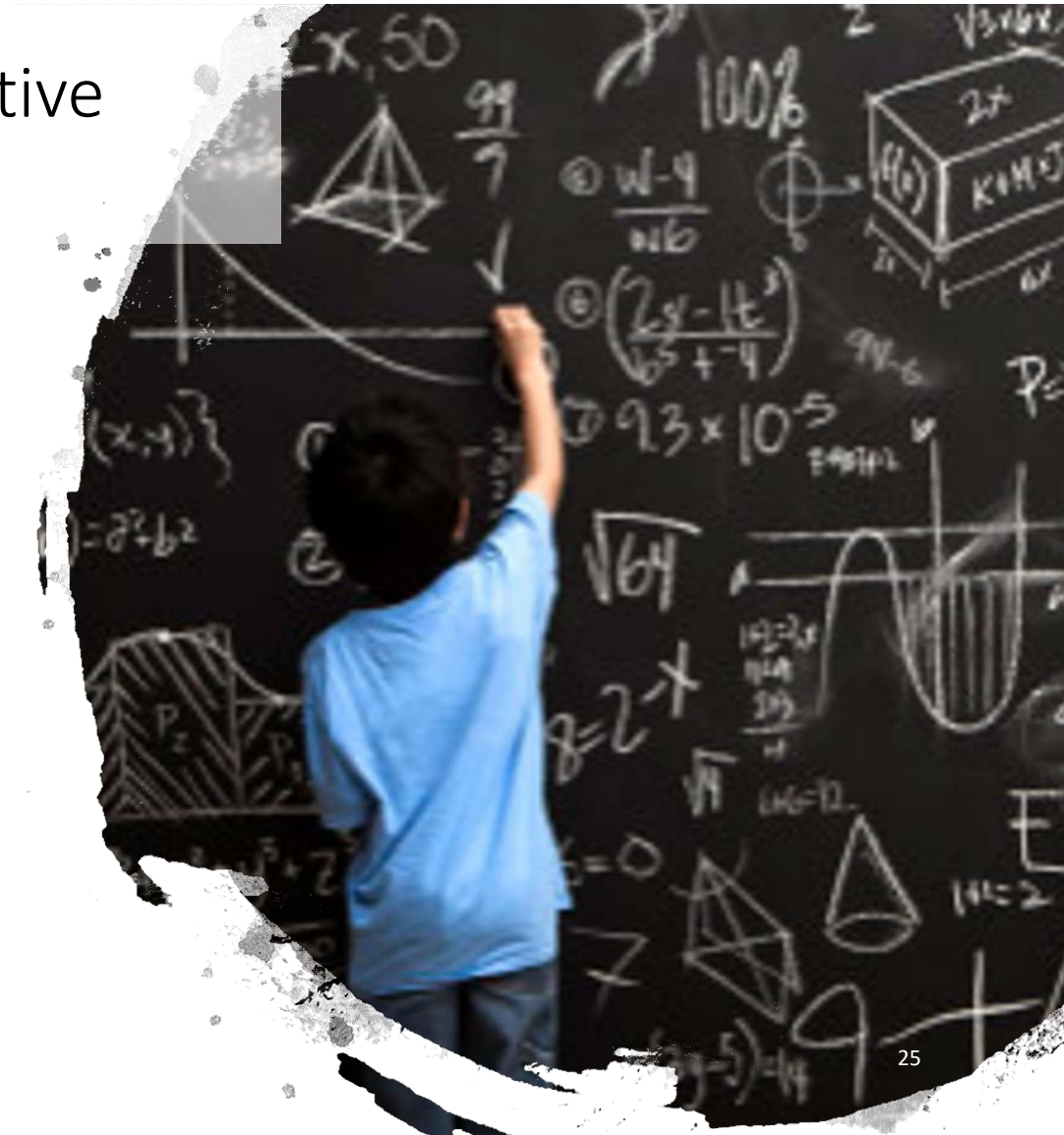
- Thank-you, *and*... is at the foundation of creativity and innovation
- Requires trust
- Provides a bridge from a *not so good* idea → to a *better* idea → to a *great* one
- Helps sustain, maintain, and strengthen teams

*Ideas do not require action – they do require an opportunity to be acted upon*



# There is no Formula for Effective Leadership

- Self- and other-awareness
- Shared responsibility for success
- Accountability for issues and problems
- Mentoring others
- Managing up and across
- Creating a safe environment
- Speaking up, challenging ideas
- Difficult conversations
- Giving your best everyday
- Serving as a role model

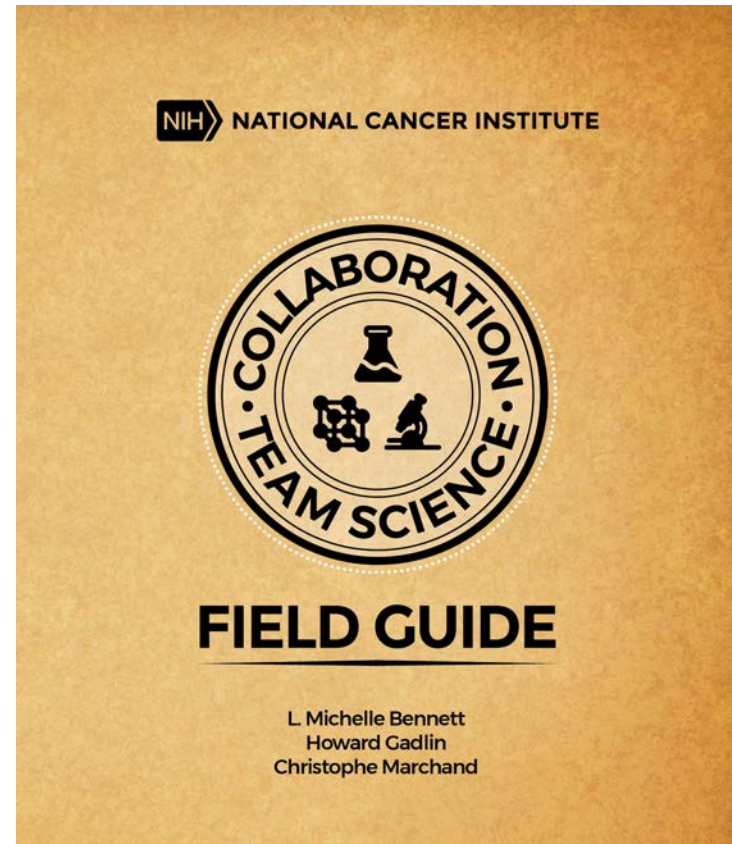


*“The most productive, innovative teams were led by people who were both task- and relationship-oriented. What’s more, these leaders changed their style during the project.”*

Gratton and Erickson,  
HBR, November 2007  
<https://hbr.org/2007/11/eight-ways-to-build-collaborative-teams>

# Sharing Credit

- Christophe Marchand
- Howard Gadlin
- Samantha Levine-Finley
  
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[teamscience.nih.gov](https://teamscience.nih.gov)





MOUSE



Communicating  
Effectively  
Across our  
Disciplinary  
Languages

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