AGLP Leadership Development Curriculum

Technical Proficiency & Technical Leadership: Experiential Learning & Reflections Preview

1/24/2022

AGLP Leadership Development Sequence

Leading-Self Competency: Technical Proficiency & Technical Leadership

January: Seminar & (self-paced) Reference Review

February: Practicum (completed in your life-environment)

March: Post -Practicum Session

Leading Others Competency: Team Building

February

March

April

Date	Leadership Competency Theory Seminar	Emotional Intelligence Theory Seminar	Practicum Preview Session	Practicum & Reflections	Topic Review Session (Mentorship)
January				Personal Conduct	
January 10 12:00-1:00	Technical Proficiency				
January 24 12:00-12:30			Technical Proficiency		
February				Technical Proficiency	
February 2 12:00-12:30 w/GC					Personal Conduct
February 7 12:00-1:00	Leading Others: Team Building				
February 21 12:00-12:30			Team Building		

Jan: Technical Proficiency

Leading Others

Feb: Team Building
March: Influencing Others
April: Effective Coms
May: Mentoring
June: Respect for Others
July: Taking Care of People

Leadership Practices

Aug: Model the Way
Sept: Inspire a Shared Vision
Oct: Challenge the Process
Nov: Enable Others to Act
Dec: Encourage the Heart

AGLP Leadership Development Curriculum

Technical Proficiency & Technical Leadership: Review

Technical Proficiency

- technical knowledge & expertise to organize, prioritize tasks & use resources
- leaders demonstrate proficiency and are aware of how their actions contribute to organizational success
- maintain credibility on technical matters & keep current on technological advances in professional areas

Technical Leadership

Responsibilities of a technical leader:

- communicating the team's vision and path to achieve technical excellence
- defining projects & providing technical direction
- leading by example that demonstrates technical expertise
- "standard" leadership responsibilities

image source

Virtual/Remote Technical Leadership Skills

How to create a lasting virtual culture:

1. Stay in contact w/remote employees (1-on-1 & group meetings)
2. Communicate clearly & concisely
3. Use the right communication method
4. Lead w/empathy & foster trust
5. Establish clear work expectations & goals
6. Give your team the right resources
7. Encourage open dialog
8. Make yourself accessible

Virtual Leadership - Essential Skills for Managing Remote Teams

Case Study: Technical Proficiency in Academia

Kyle Vanderlick
Thomas E. Golden, Jr. Professor of Chemical & Environmental Engineering

"My advice to academics starting their career is to take as much risk as they can emotionally tolerate. At this stage in their career, they are (or should be!) bursting with ideas and with energy. At tenure time they will be judged not only by the quality of their work but also by how much they have broadened and distinguished themselves from their previous mentors. Even if their ideas don't pan out as planned, the process itself (in fact, research in general) will uncover other opportunities for discovery if not even better ones. Of course, one can always devote one's energy to projects that they know "will work" (i.e. extensions of their previous work) but chances are the significance of this work will not be that high because, by definition, it is incremental work."

DoD Enabling Competencies	
Developing People	**Influencing Others**
Leading People	**Developing Strategy & Vision**
Thinking Critically	**Fostering Agility**
Building Trust & Credibility	**Promoting Innovation**
Communicating Effectively	**Possessing Government Acumen**
Establishing & Maintaining Stakeholder Relationships	**Possessing a Macro Perspective** Delivering solutions within the political, economic, and social aspects, context or landscape

DoD Technical Competencies

Technical Planning	**Technical Risk Management**
Technical Requirements Definition and Analysis	**Systems Thinking** Focusing on connections and interfaces among subsystems
Logical Decomposition	**Systems Complexity** Understanding the interfaces within and between systems
Product Verification and Validation	**Big Picture Thinking** Managing the technical aspects external to the system
Product Transition Deploying the technical product into production, test, operations and sustainment	**Abstraction** Identifying and translating a pattern in one domain to a different domain
Lifecycle View	**Paradoxical Mindset** Holding opposite views simultaneously to make better decisions

Case Study: Technical Proficiency in Industry

Amazon's Principal Engineering Community Tenants		
exemplary practitioner	technically fearless	lead with empathy
balanced & pragmatic	illuminate & clarify	flexible in approach
respect what came before	learn, educate, & advocate	have resounding impact

BD Technology Leadership Development Program

The BD **Technology Leadership Development Program's (TLDP)** vision is to develop future leaders in our R&D organization by providing TLDP associates with broad and deep technical assignments across BD.

The program consists of three progressively more challenging assignments (1.5–2 years each) that span multiple businesses and/or locations within the company. These assignments are designed to strengthen technical depth and leadership skills.

A personalized and dynamic career path is sculpted for each TLDP associate with the influence of senior R&D leaders and your personal skills and interests.

BD

Value proposition:

As an associate in one of our rotational programs, you will have the opportunity early in your career to work on challenging and meaningful assignments that directly impact the organization and its work addressing some of the world's most compelling health problems. Diverse rotations, combined with coaching and development, enable associates to build new skills and explore multiple career paths. These unique programs and a built-in network provide visibility and preparation for future leadership opportunities.

Program features:

- Custom-designed rotational assignments guided by participant's input, resulting in a fluid, flexible and dynamic career development experience
- Assignments focused on developing each participant's technical strength, leadership abilities, cross-functional skills and business acumen
- Assignments spanning multiple locations and BD businesses within key R&D facilities located in or near the following major cities: New York City, NY; Baltimore, MD; Raleigh, NC; San Diego, CA; San Jose, CA; Salt Lake City, UT; Chicago, IL; Boston, MA; Phoenix, AZ; Providence, RI; and Atlanta, GA
- Rotation opportunities outside of associate's domain of expertise build breadth by providing exposure to different technology fields, phases of product development and job functions
- Examples of assignments include:
  - Designing and developing product components in drug delivery systems, surgical devices or high-tech diagnostics
  - Contributing to the development of novel materials technology that enables invention of new medical devices or therapies
  - Software development for new technologies that enable better and faster disease diagnosis
- Each assignment builds on the previous, with increasing technical complexity and leadership responsibilities
- Potential for career growth in technology-based roles earned by: quickly learning the business, quality leadership and strong technological skills

Program qualifications:

- Outstanding PhD graduates (or anticipated defense within 1 year of application date) with technical depth in engineering, technology or life sciences fields, such as mechanical engineering, electrical engineering, biomedical engineering, chemical engineering, materials science, chemistry, biochemistry, cell biology, computer science, data science and related fields
- Early-stage career (no more than 2 years of industry or academic experience outside the pursuit of a degree)
- Significant demonstrated leadership experience. Leadership may span realms including but not limited to: technical, academic, entrepreneurial, organizational and personal
- Willingness and ability to relocate to different geographic locations for at least two out of the three assignments

TLDP_recruiters@bd.com

The BD TLDP Program is unable to provide visa sponsorship. In order to qualify for this position, you must be eligible to work in the U.S. without sponsorship for employment visa status by BD for the duration of this program, which is anticipated to be 5–6 years.

For more information, visit bd.com/TLDP

BD, Franklin Lakes, NJ, 07417, U.S.

bd.com

BD LDP Info Sessions:
FEB 4 – 2ET, FEB 9 – 5 ETZ, FEB 10 – 8 ET
(PhD/AGLP Alum: Ritta Matta is in this program at BD)

Case Study: Technical Proficiency & Entrepreneurship

Technical Proficiency References

- "Transform Your Technical Expertise into Leadership" – Monique Valcour, ***HBR***
  corporate LDPs - specific skill to improve / reflect & seek input to understand challenge (as in a technical problem) / use new info to ID behaviors to change
- "Technical Leadership of Virtual and Remotely Distributed Teams" – Francesco Dazzi et al, ***International Symposium***

- "5 Questions That (Newly) Virtual Leaders Should Ask Themselves" – Melissa Raffoni, ***HBR***

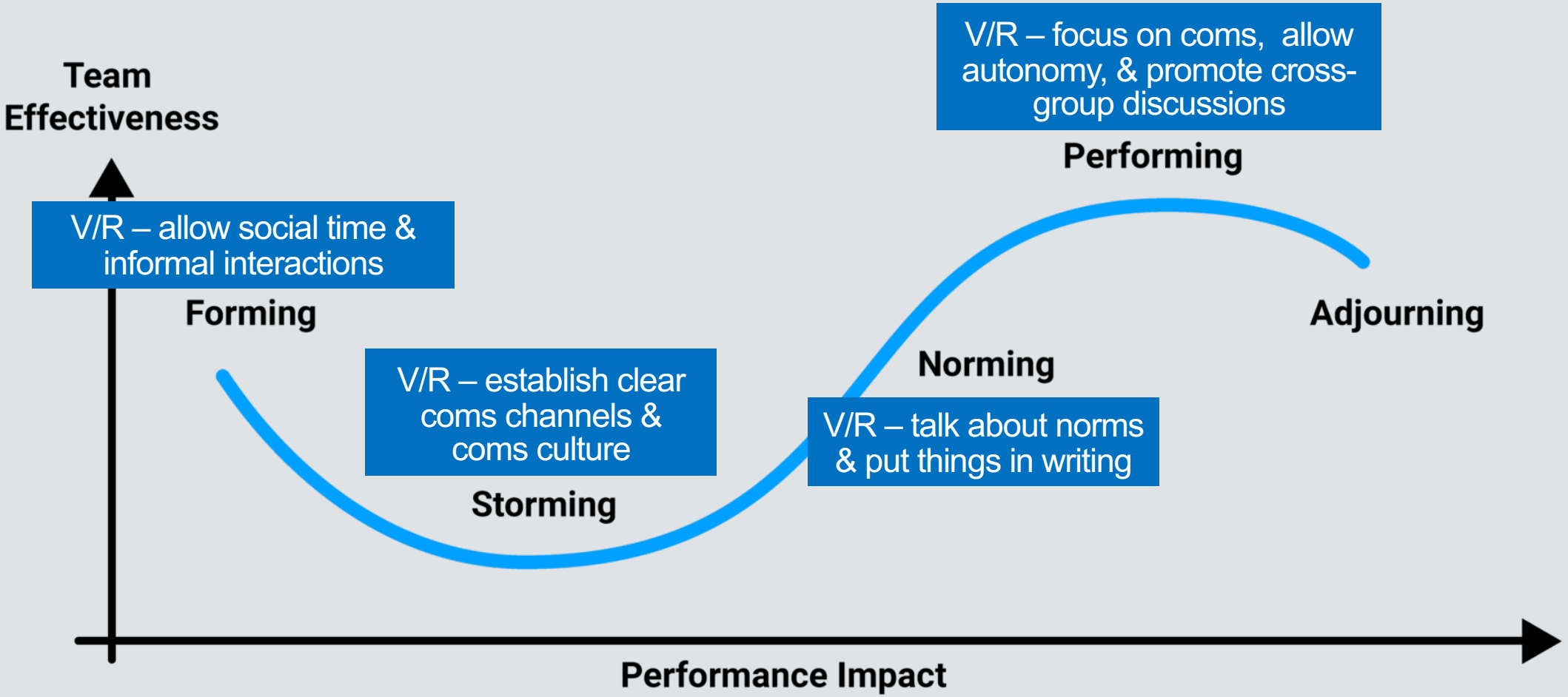
- Technical Leadership Development Guidebook, U.S. Department of Defense

Technical Proficiency References

- "Transform Your Technical Expertise into Leadership" – Monique Valcour, ***HBR***
  corporate LDPs - specific skill to improve / reflect & seek input to understand challenge (as in a technical problem) / use new info to ID behaviors to change
- "Technical Leadership of Virtual and Remotely Distributed Teams" – Francesco Dazzi et al, ***International Symposium***
  Form, Storm, Norm, Perform, Adjourn (suggestions for virtual technical leadership)
- "5 Questions That (Newly) Virtual Leaders Should Ask Themselves" – Melissa Raffoni, ***HBR***

- Technical Leadership Development Guidebook, U.S. Department of Defense

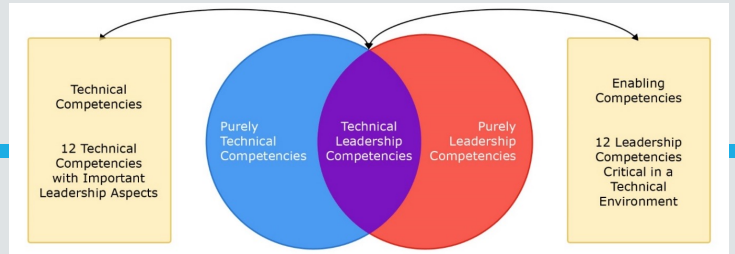
Virtual/Remote Technical Leadership Skills



Tuckman's Model of Team Effectiveness

Technical Proficiency References

- "Transform Your Technical Expertise into Leadership" – Monique Valcour, ***HBR***
  corporate LDPs - specific skill to improve / reflect & seek input to understand challenge (as in a technical problem) / use new info to ID behaviors to change
- "Technical Leadership of Virtual and Remotely Distributed Teams" – Francesco Dazzi et al, ***International Symposium***
  Form, Storm, Norm, Perform, Adjourn (suggestions for virtual technical leadership)
- "5 Questions That (Newly) Virtual Leaders Should Ask Themselves" – Melissa Raffoni, ***HBR***
  You have competition & need new skills: Be strategic / Revamp coms / Reset roles for success / Keep eye on big picture / Find ways to strengthen company culture
- Technical Leadership Development Guidebook, U.S. Department of Defense



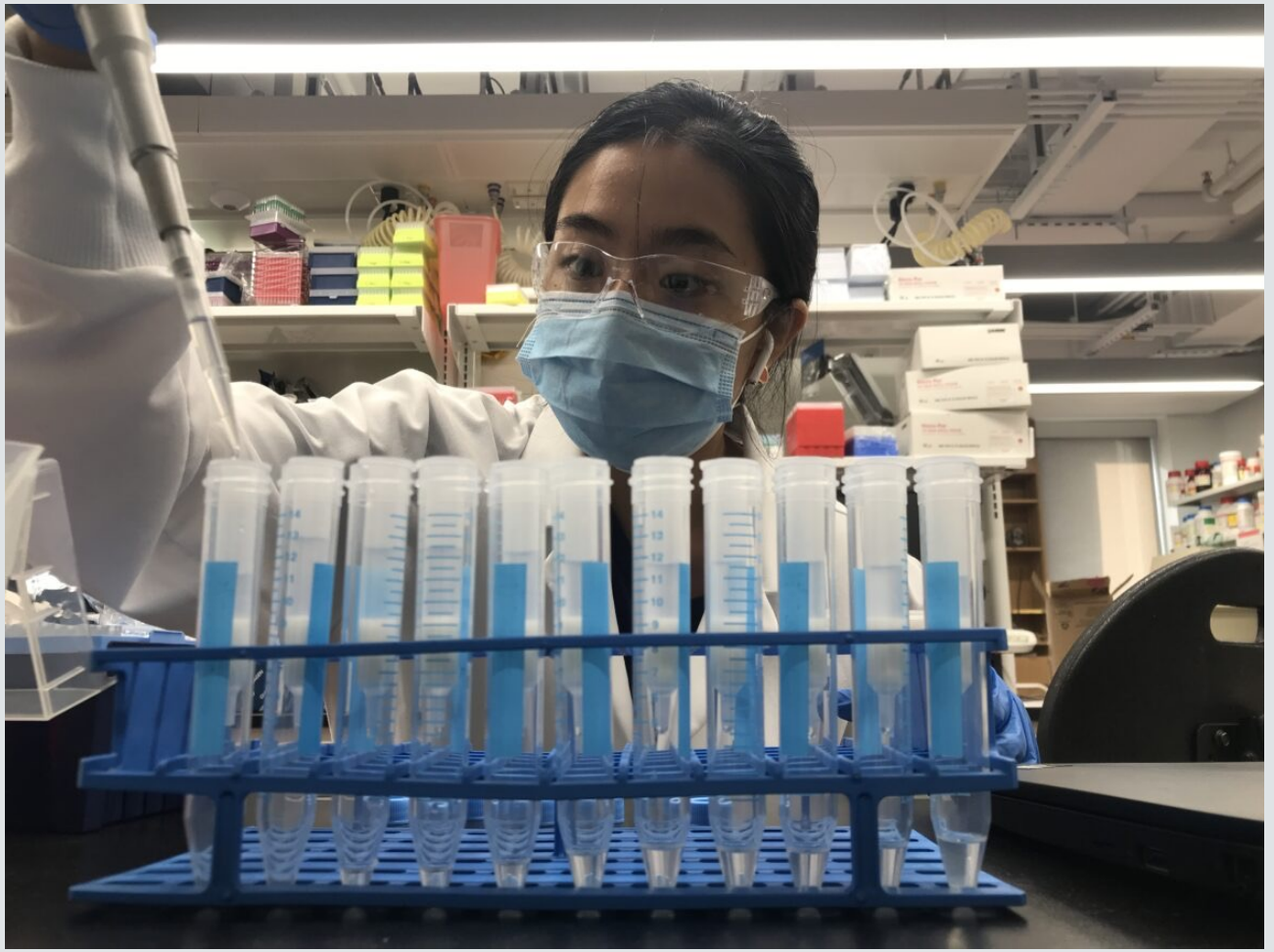
Technical Proficiency & Technical Leadership

Practicum: Experiential Learning & Reflection

Technical Proficiency & Leadership: Experiential Learning Scenarios

- **Lab work environment** – "take as much risk as you can emotionally tolerate"*

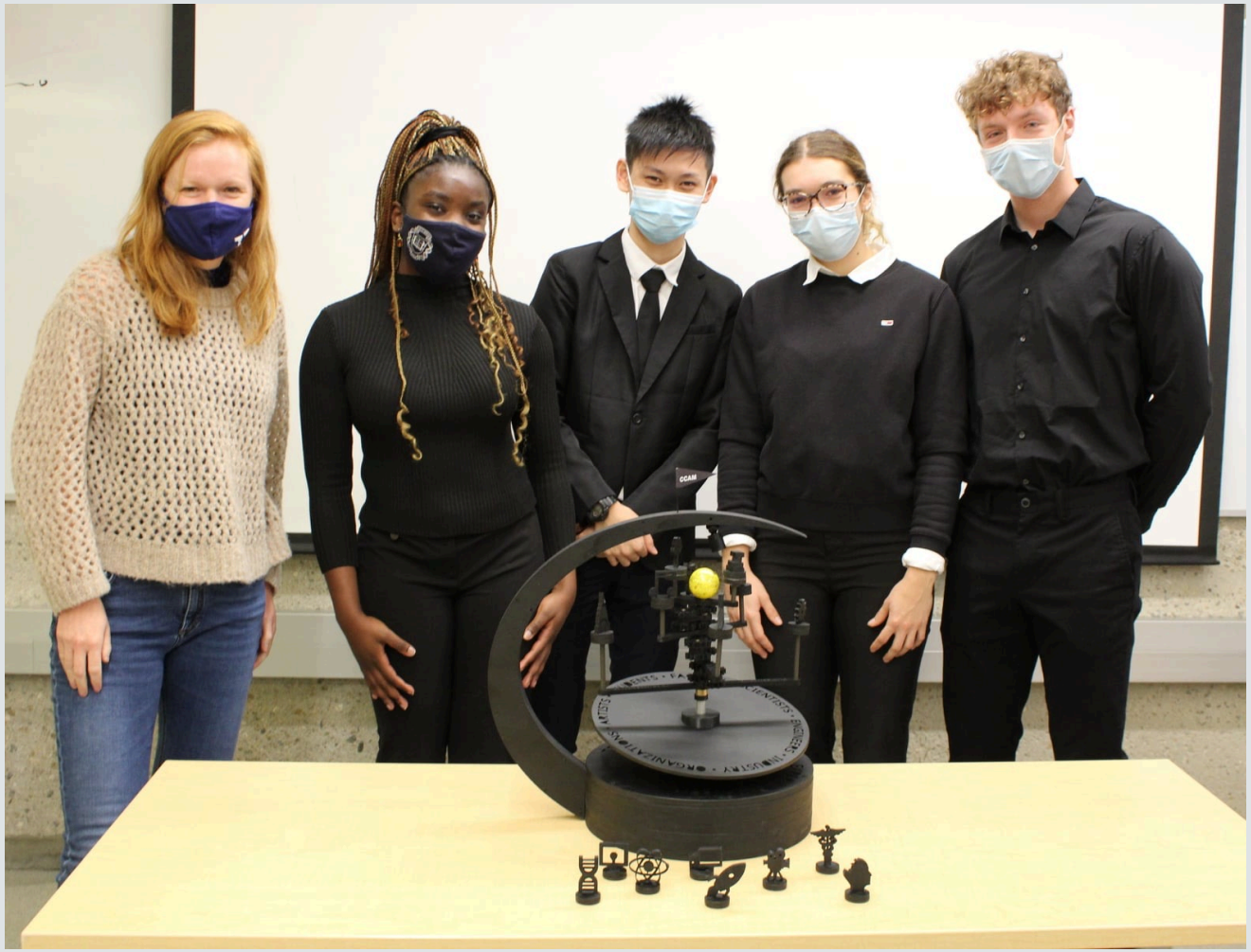
* Professor Kyle Vanderlick



- **Research publication process** – record how your technical knowledge & expertise allow you to organize, prioritize tasks & use resources

Technical Proficiency & Leadership: Experiential Learning Scenarios

- **Teaching Fellow environment** – what "virtual technical leadership skills" are needed to start the term?



- **Home environment** – "live" with empathy, be flexible in approach, & have a resounding impact*

*Amazon's Principal Engineering Community Tenants

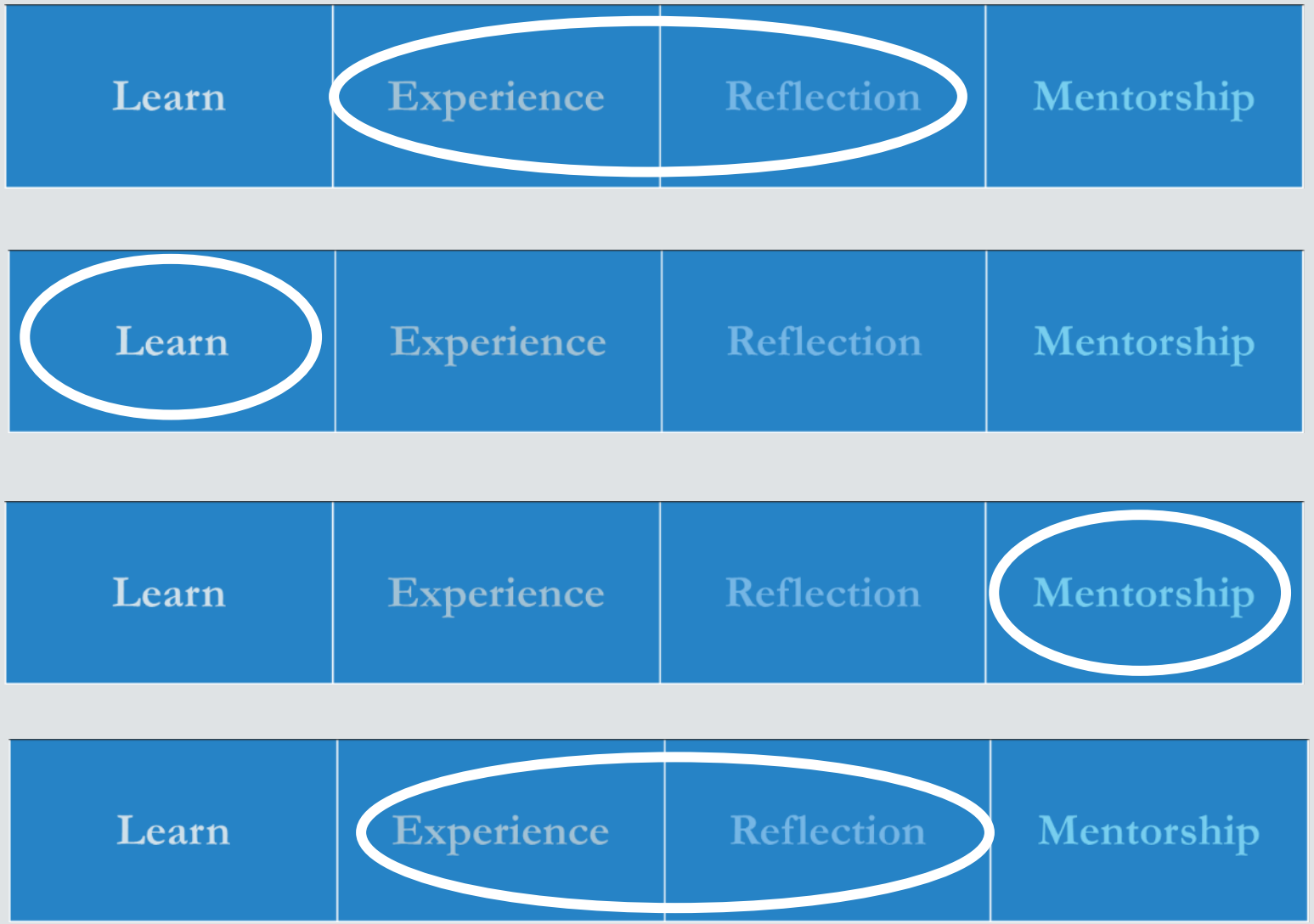
Technical Proficiency & Leadership : VW Experiential Learning

- **Staying innovative** – Finding creative projects & opportunities

- **Technical Leadership** – Focusing on the "long game" (strategic vision) in the midst of short-term crises

Next Steps

- Tech Prof. & Leadership – all February
- Team Building – Feb 7
  Review/Preview – Feb 21
- Personal Conduct – Feb 2
- Team Building - all March



AGLP Leadership Development Curriculum

Technical Proficiency and Technical Leadership: Experiential Learning & Reflections Preview

1/24/2022