



# Leveraging PDRI MATRS & Accuracy Factors for Projects in Front End Planning During COVID-19

August 11, 2020

# General Information



- Webinar is being recorded
- Please stay on mute
- Recording and slides available at [www.construction-institute.org/blog](http://www.construction-institute.org/blog)
- Ask questions via “Questions” box

# Today's Panelist



**Sandra MacGillivray**

Managing Director  
Valency



**Valerie Weaver**

Project Management Subject Matter Expert  
Marathon Petroleum

# Safety Moment



# Valency

Making capital projects a source of  
**excitement** and **growth**,  
not anxiety and risk.



*Changing How  
the World Builds*



# Webinar objectives



## How do we leverage the latest PDRI innovations and virtual technology in the face of COVID-19?

- Challenges projects currently in Front End Planning (FEP) face
- Risks to scope maturity in FEP efforts
- How to leverage CII's PDRI MATRS and assess how the team is functioning (Accuracy factors)
- Virtual facilitation best practices for PDRI sessions

# The Challenge

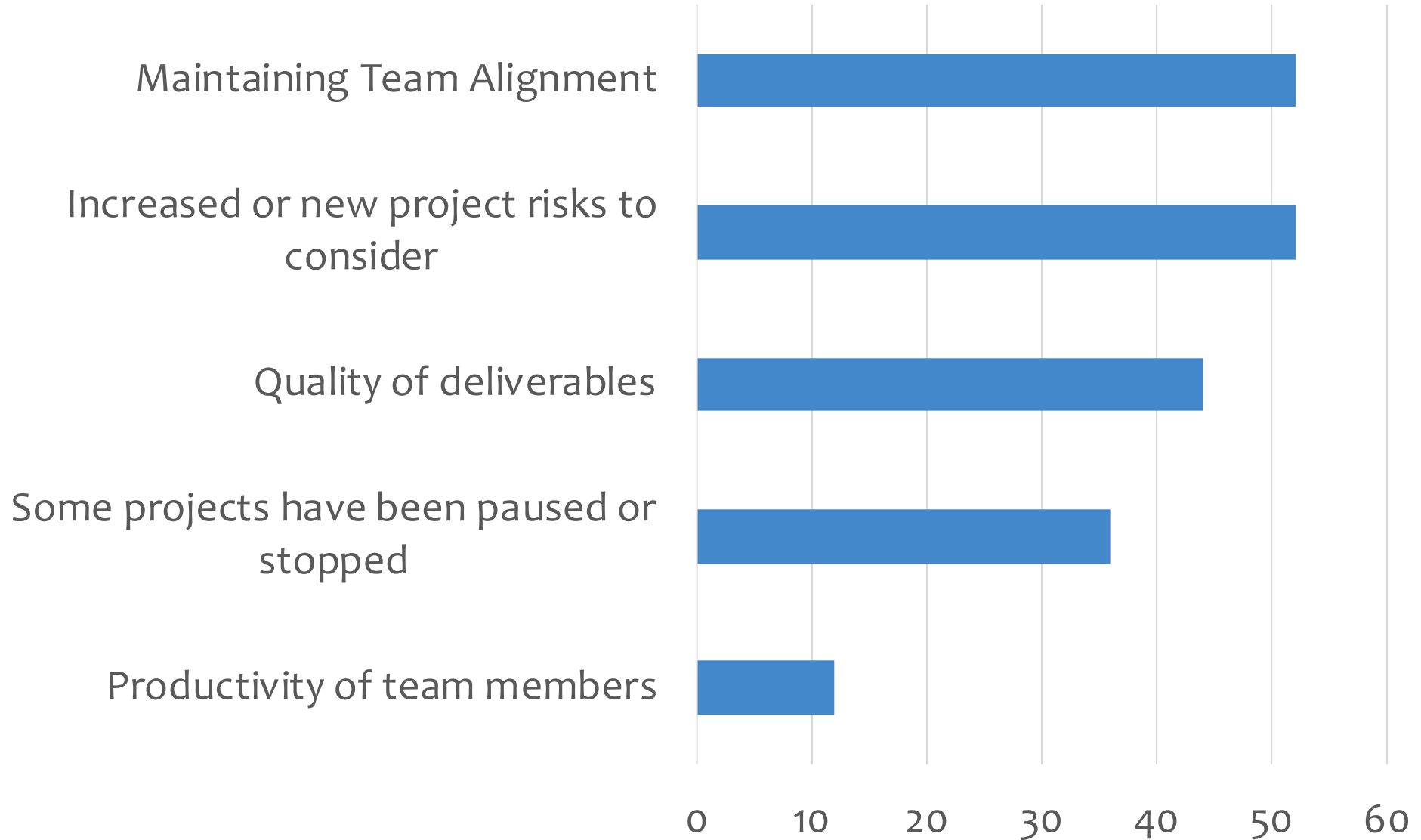


- Projects completing Front End Planning during COVID-19 are facing some of the most challenging circumstances in recent history
  - No co-location of team members
  - A stressful work climate
  - Virtual communication with every stakeholder group



Photo by [Ketut Subiyanto](#) from [Pexels](#)

# Challenges in Front End Planning – June Survey





## Poll

Which of the challenges below are your projects in front end planning experiencing?

- Maintaining team alignment
- Some projects have been paused or stopped
- Increased or new project risks to consider
- Quality of deliverables
- Productivity of team members
- Other

**Can PDRI be used to help us assess  
“how” the project team  
is functioning  
in the face of COVID-19?**

# PDRI MATRS & Accuracy Factors

# Project Definition Rating Index (PDRI)



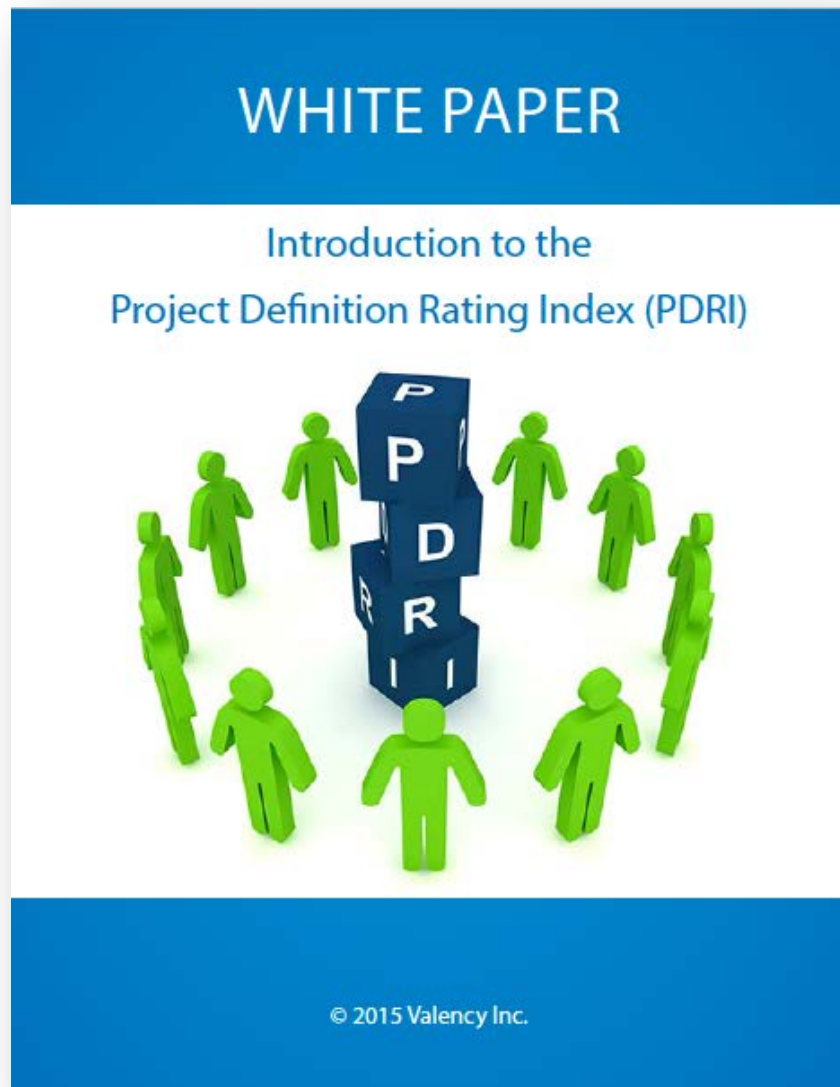
- A methodology to measure the level of scope definition
  - Comprehensive review
  - Identify gaps
  - Take appropriate action
  - Reduce risk in front end planning

# New to PDRI?

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White Paper:  
Introduction to PDRI

<https://valencyinc.com/pdri>



# PDRITemplates



**Industrial Projects**



**Building Projects**



**Infrastructure Projects**



**Mfg & Life Sciences  
Projects**



# Elements “At Risk”

- Business plan and assumptions must be continually revisited
- Rapid change
- Evolving restrictions and guidelines

## B.2 Market Strategy

A market strategy has been developed and clearly communicated. It identifies the driving forces (other than safety) for the project and specifies what is most important from the viewpoint of the business group. It should address items such as:

- Cost:
  - Maximum project cost that market will accept
  - Production cost
  - Cost reduction over time
- Schedule:
  - Product demand schedule (over operational life)
  - First product sales date
- Quality, including critical product specifications
- Other

### *Comments on Issues:*

*Other issues can include business benefits such as the internal rate of return (IRR), the return on revenue (ROR), net present value (NPV), subsidies, tax credits, competitive analysis, and regulatory requirements such as zero liquid discharge (ZLD), waste disposal, and emissions. Social, political, economic issues and, in some cases, safety concerns should also be considered as part of the completeness of this element. For nonprofit and government agencies, this is a mission need statement to fill a capability gap. The key focus is the driver for the project (i.e., cost, schedule, or quality).*

Close

# Elements “At Risk”

- Limited access to site to conduct walk-downs and assessments

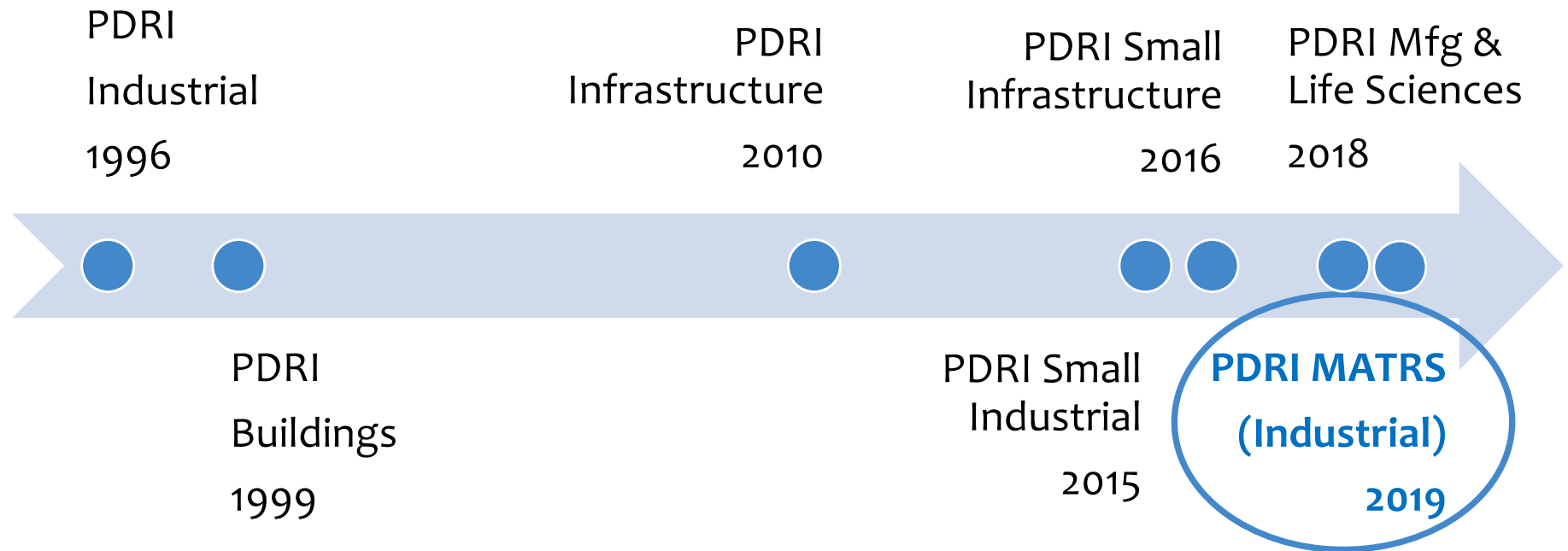
## D.3 Site Characteristics Available vs. Required\*

An assessment of the available versus the required site characteristics is needed. The intent is to ensure that the project team has taken into consideration the need to improve or upgrade existing site utilities and support characteristics. Issues to consider should include:

- Capacity:
  - Utilities
  - Fire water
  - Flare systems
  - Cooling water
  - Power
  - Pipe racks
  - Waste treatment/disposal
  - Stormwater containment system
- Type of buildings/structures
- Land area
- Amenities:
  - Food service
  - Change rooms
  - Medical facilities
  - Recreation facilities
  - Ambulatory access
- Product shipping facilities
- Material receiving facilities
- Material storage facilities
- Product storage facilities
- Security:
  - Setbacks
  - Sight lines
  - Clear zones

Close

# Evolution of PDRI Tools

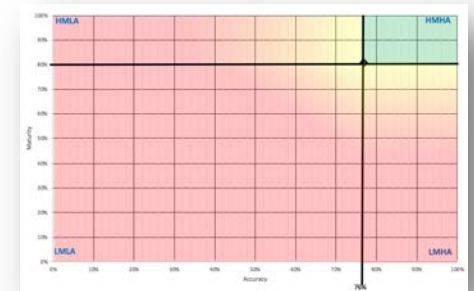


# PDRI MATRS Industrial – Secondary Metrics



- Maturity or completeness of FEED deliverables
- 46 PDRI Industrial elements included

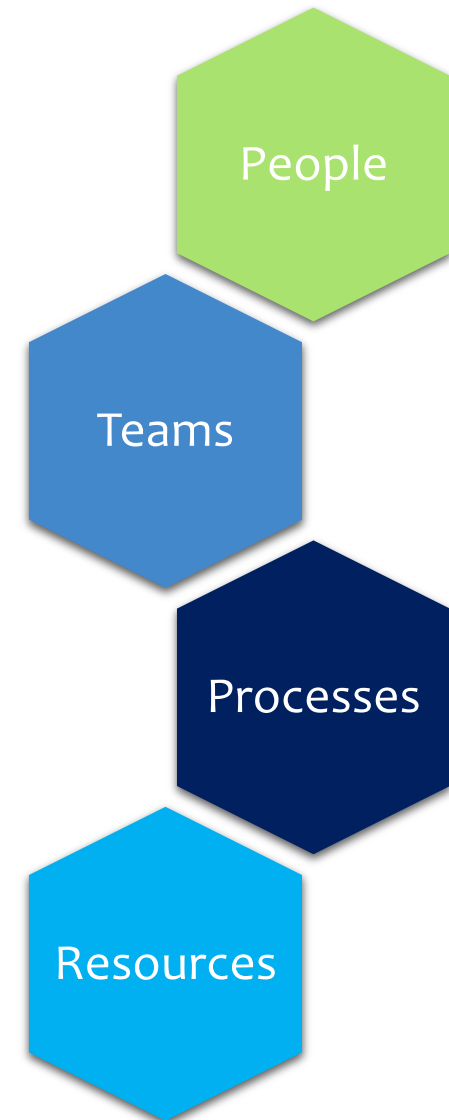
- Confidence in development of FEED deliverables
  - Leadership
  - Execution
  - Processes
  - Resources



# Accuracy Scoring System



- 27 factors organized into four categories
  - Weighted based on research results
- Maximum score = 100%
- Target is greater than 76% by end of Detailed Scope (Phase 3)
- Higher the score the better



# Accuracy Definition Levels



## 0 = Not Applicable

- Not required for this project

## 1 = High Performing

- Criteria are fully met

## 2 = Meets Most

- Criteria are consistently met and understood with minor gaps

## 3 = Meets Some

- Criteria are partially met but without improvement, project success could be in jeopardy

## 4 = Needs Improvement

- Criteria are not consistent in meeting project expectations and without improvement, the project is at risk
- Substantial action to meet expectations is required

## 5 = Not Acceptable

- Criteria are consistently below expectations and current performance is unacceptable
- Project success cannot be achieved in the current state and action is required



# Accuracy Factors “At Risk”



## 2f. Co-location

Co-location of execution team members.

Team members who are co-located tend to develop a shared purpose, goals, and culture. The co-location of team members also facilitates the development of a positive team climate, independent team processes, maturation of team members, and the team itself. Lack of co-location may lead to lack of alignment and effective communication. Additionally, co-location of team members may be affected by time-zones and language barriers.

## 3a. Communication

Communication within the team is open and effective; a communication plan with stakeholders is identified.

An open and effective communication channel exists at all times to transfer FEED information in an efficient and expedient manner. Communication is important for building and maintaining a productive interface between the FEED team and stakeholders.

Close

# Accuracy Factors “At Risk”



## 3c. Priorities

Clear priorities for cost, schedule, and required project features.

Setting priorities enables the project team to determine which project aspect is most essential (e.g., cost, schedule, required features). These priorities support scope definition, decision-making, risk management, plan optimization, negotiating project changes, and integrated change control.

Close

# Accuracy Factors “At Risk”

## 4c. Local knowledge

Local knowledge (e.g., institutional memory, understanding of laws and regulations, understanding of site history) and access to visit and evaluate the site.

The knowledge that the project team and subject matter experts have developed over time in a given area ensures that the FEED is based on experience and adapted to the local culture and environment. For international projects, the project team should consider government influence, international codes and standards, taxes, foreign exchange rates, and applicable labor laws.

Additionally, access to the project site provides the project team with hands-on review and allows field verification of the site characteristics. This factor is extremely important for projects involving renovation and revamp construction activities.

Close

# How to assess Accuracy in any PDRI Session

1. Conduct your normal PDRI session using your current template.
2. Break
3. Reconvene with the core project team for the “Accuracy” session
  - Requires 60 – 90 minutes depending on size of group
  - Walk-through the 27 accuracy questions from PDRI MATRS
  - Capture action items as you go
  - Share the Accuracy % (target of +76% from CII)
4. PDRI Summary Report
  - Executive summary addressing scope definition and accuracy
  - PDRI Total Score
  - Accuracy Score
  - Combined action item list

# Available Resources



## PDRI MATRS Overview

<https://valencyinc.com/pdri-matrs>



## CII Research Publications

1. RT-361 Development of the PDRI Maturity & Accuracy Total Rating System (MATRS)

<https://www.construction-institute.org/resources/knowledgebase/knowledge-areas/project-planning/topics/rt-361>

2. RT-331 Assessing the Maturity and Accuracy of Front End Engineering Design

<https://www.construction-institute.org/resources/knowledgebase/knowledge-areas/project-planning/topics/rt-331>



# Virtual Facilitation Best Practices





# Preparation is Key



## Logistics

- Location considerations
  - Time zones
  - Language
  - Internet quality
- Ideal less than 20 participants
- Meeting platform
  - Accessible
  - User friendly

## Attendee Preparation

- Agenda
- Facilitation package
- Understanding of PDRI
- Expectations
- Technology guidelines
  - Webcam (use or not)
  - Audio preferences
  - Microphone/headset
  - Test meeting platform
  - VPN issues

# Virtual Meeting Room



- Pre-session testing
  - Audio and visual
  - Visual
- Meeting lobby
  - Session details
  - Audio connection information
  - Technical support contact
  - Materials for download
  - Attendee list
  - Attendee chat box

A screenshot of a virtual meeting lobby interface titled "PDRI Session - Adobe Connect". The main content area displays "Today's PDRI MATRS Session" with the Valency logo. It includes a graphic of green stick figures around a blue "PDRI" sign. Session details are listed: Project "Large Industrial Project", Schedule "April 1, 2020 10:00 AM - 4:00 PM CET". Facilitator "Tim Podesta" (London, UK, tim.podesta@valencyinc.com) and Co-facilitator "Nell van Waslum" (Ottawa, CA, nell.vanwaslum@valencyinc.com) are shown with their photos. A right sidebar contains "Audio Conference Options" (Computer Audio recommended, Dial in via phone: Room: 2131063, DK: +45 69918360, UK: +44 2033185111, CA: +1 416 8000338), "PDRI Session Downloads" (White Paper - Introduction to PDRI.pdf, 662 KB; PDRI MATRS Industrial Facilitation Package.pdf, 917 KB), and an "Attendees" list showing one participant: "Sandra MacGillivray". A "Chat (Everyone)" box is at the bottom.

# Session Agenda

## Duration

- People getting better at virtual meetings
- Can we similar in length to in-person, but requires strong facilitation skills

## Introductions

- Participant introductions with video
- Ice breaker
- Housekeeping items

## Frequent breaks

- After each section
- Consider conducting Accuracy section the following day



# PDRI Session Tips



- Attendance form online (e.g. Microsoft forms)
- Engagement tools (polls)
- Facilitator video
- Participant list (visible to all, know roles within the team)
- Private chat window for facilitator and scribe
- Non-distracting but visually engaging assessment process

Definition Level for this element?

View Votes Edit End Poll

Definition Level for this element?

|   |             |     |
|---|-------------|-----|
| <input type="radio"/> 1. Completely Defined | <div></div> | (0) |
| <input type="radio"/> 2. Minor Gaps         | <div></div> | (0) |
| <input type="radio"/> 3. Some Gaps          | <div></div> | (0) |
| <input type="radio"/> 4. Major Gaps         | <div></div> | (4) |
| <input type="radio"/> 5. Poor Definition    | <div></div> | (1) |
| <input checked="" type="radio"/> No Vote    |             |     |

☒ Broadcast Results

Definition Level - Accuracy

View Votes Edit End Poll

Definition Level for this factor?

|  |             |     |     |
|--|-------------|-----|-----|
| <input type="radio"/> 1. High Performing   | <div></div> | 20% | (1) |
| <input type="radio"/> 2. Meets Most        | <div></div> | 40% | (2) |
| <input type="radio"/> 3. Meets Some        | <div></div> | 20% | (1) |
| <input type="radio"/> 4. Needs Improvement | <div></div> | 0%  | (0) |
| <input type="radio"/> 5. Not Acceptable    | <div></div> | 20% | (1) |
| <input checked="" type="radio"/> No Vote   |             |     |     |

☒ Broadcast Results

# PDRI Facilitator Tips

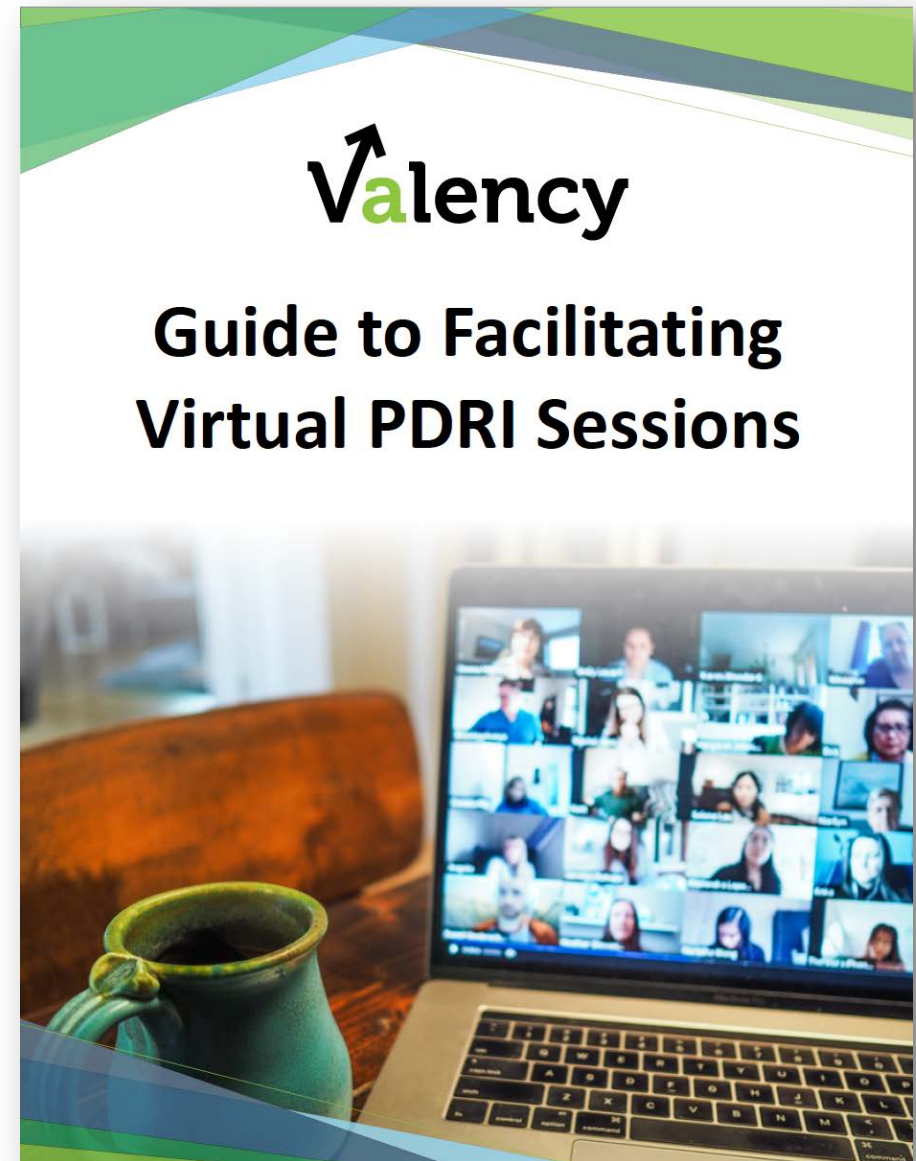


- **Come prepared**
  - with understanding of project and team dynamics
  - plan for breaks
- **Connect visually**
  - look at your audience through your webcam, arrange materials to maintain eye contact with participants
- **Minimize distractions**
  - ensure your workspace and background is free of distractions so that the focus is on you
- **Voice**
  - use inflection, pace and pitch to keep participants engaged. Make sure audio is clear and volume is good

# Available Resources

Guide to Facilitating  
Virtual PDRI Sessions

<https://valencyinc.com/virtual-pdri>







# Summary



# Recap on Webinar Objectives



**How do we leverage the latest PDRI innovations and virtual technology in the face of COVID-19?**

- Significant challenges in FEP due to COVID-19
- Risks to both the maturity and accuracy of FEP efforts
- Leverage Accuracy factors from CII's PDRI MATRS to assess how the team is functioning
- Virtual facilitation best practices are rapidly maturing across the industry



# Questions?



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