

Productivity Certification Framework

Productivity Improvement Forum (Series)



Agenda

01

Introduction to
Productivity
Council

02

Pillars of
Certification

03

Enabling
Certification

04

Benefits of
Certification

Roadshow Objective



Preparation

- In light of upcoming changes to manpower policies, mechanization and the suite of productivity practices and tools can help to address the labour gap.
- Additionally, PCF will be one of the pathways for the new R1 framework.



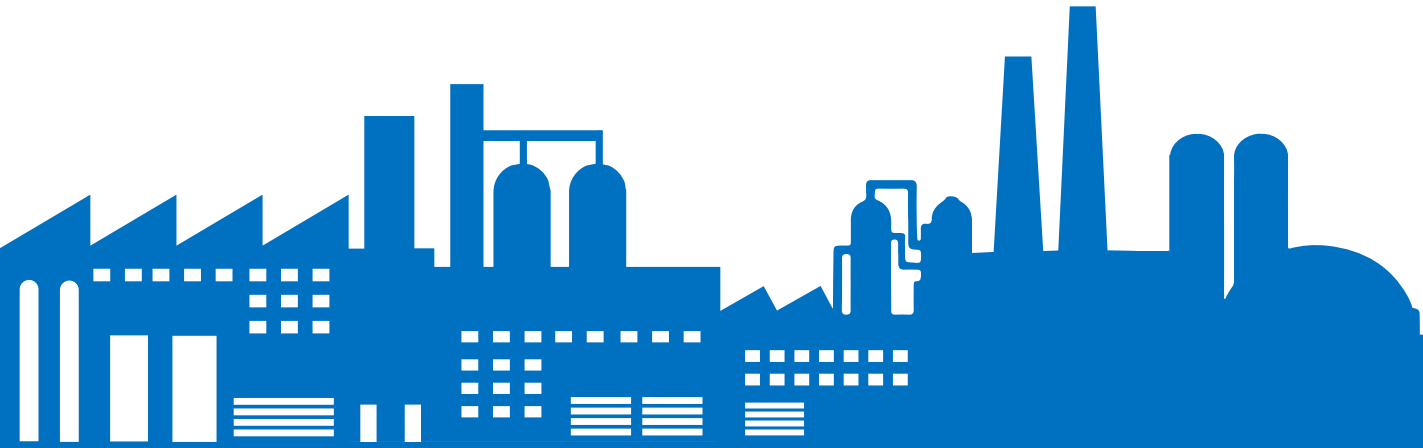
Sharing

- ✓ Insights from participating companies on the observed improvements and challenges of Certification.



Onboarding

- ✓ Provide an overview for PCF and introduce the various productivity initiatives of the PCF.
- ✓ Help next layer of PCM companies to come onboard, which is inline with the adoption roadmap.



Introduction to Productivity Council

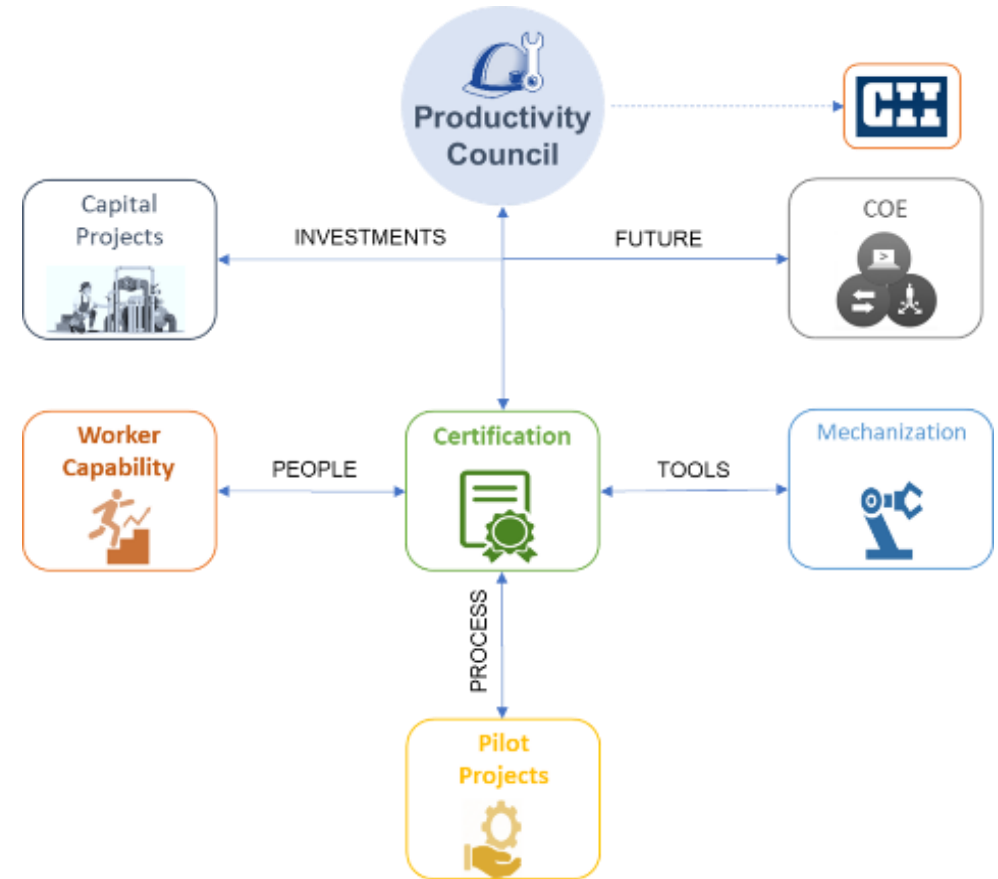
The Transformation Journey

Productivity Council (PC)

ABOUT

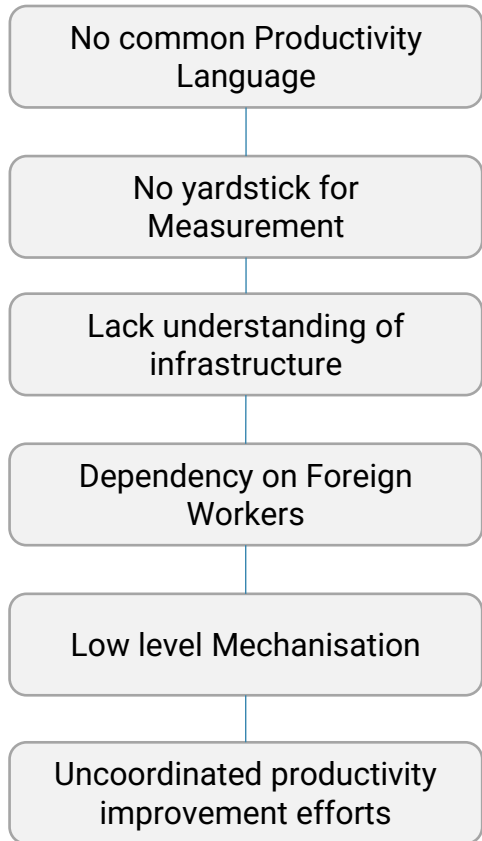
The Productivity Council for the Process Construction and Maintenance (PCM) Sector was formed in February 2015 through the collaborative effort and support of plant owners, major contractors, government agencies, SCIC and ASPRI to improve productivity in the Energy and Petrochemical industry.

The Council operates through a number of cross functional work groups chartered to advance a specific aspect of productivity in the industry, so that collectively, we improve productivity in a structured and holistic manner that also promotes continuous improvement.



The Productivity Journey of PC

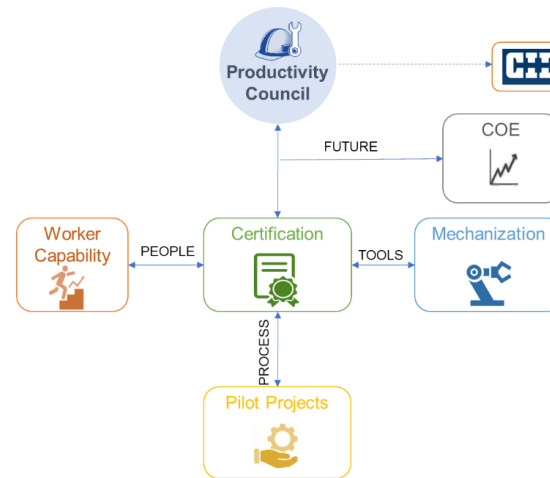
Phase- 0 (before 2014)



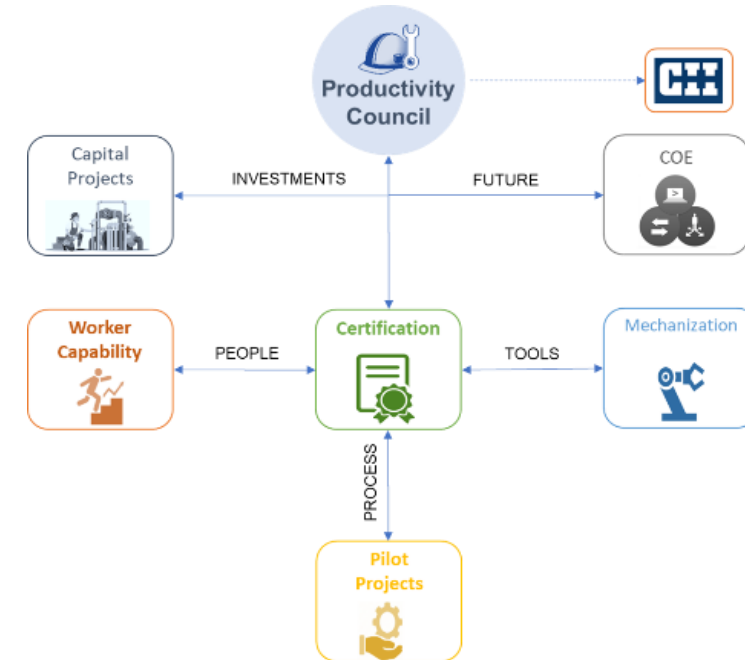
Phase-1 (2015 to 2018)



Phase-2 (2019 to 2021)



Phase-3 (2022 to 2024)



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Productivity Improvement Forum 2019

Productivity Certification Framework Launch Ceremony

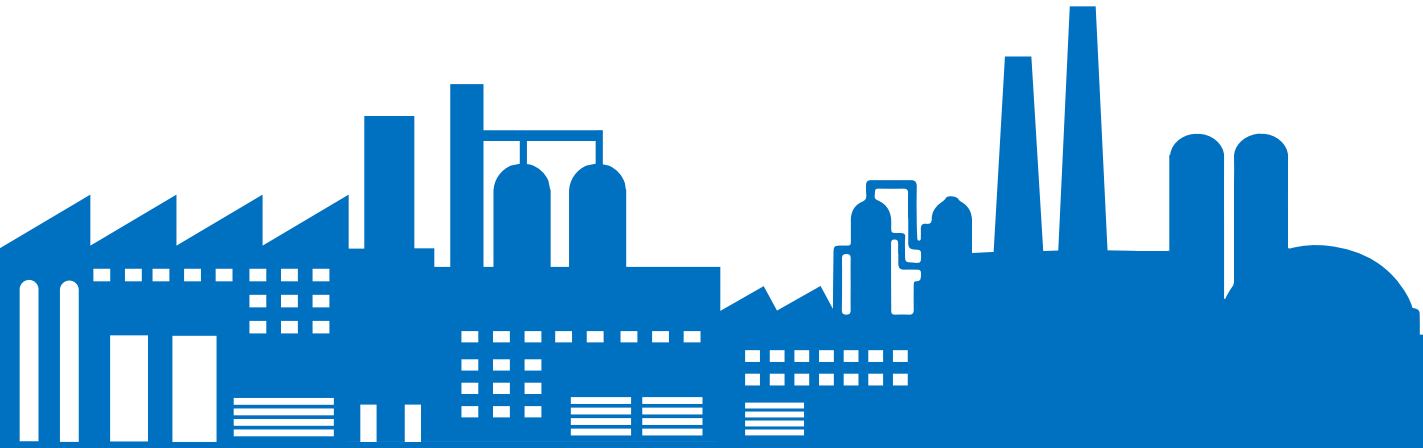
Dr Koh Poh Koon,
Senior Minister of State, Ministry of Trade and Industry

Jointly Organized by



Launch Ceremony at Productivity Improvement Forum 2019

The launch ceremony was officiated in the presence of Dr Koh Poh Koon, Senior Minister of State for Trade and Industry.

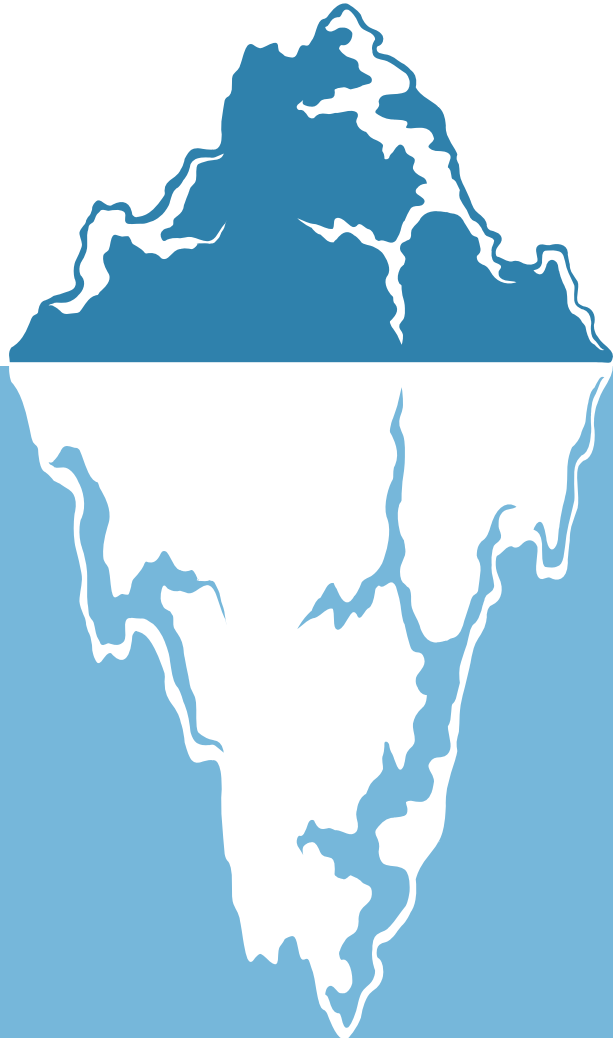


Productivity Certification Framework

PCF and its pillars

Productivity Certification Framework

Developed by the Industry for the Industry



Just a Yardstick?

PCF is more than just a benchmarking framework that allows companies to understand how they perform;

- ✓ Internally (within various sites)
- ✓ In-comparison to their competitors and
- ✓ Against Best in Class.



Diagnostic



Systematic



Sustainable

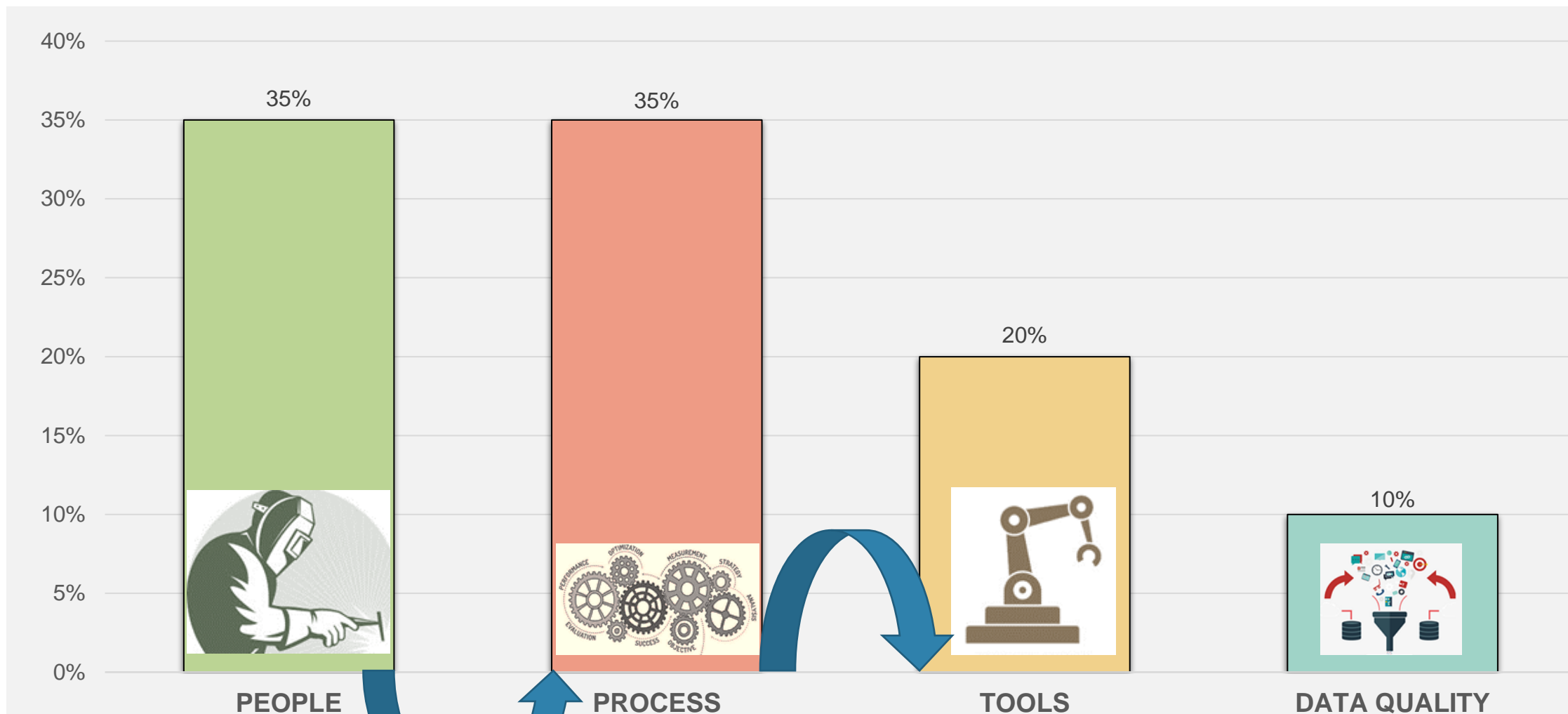


Trial & Tested

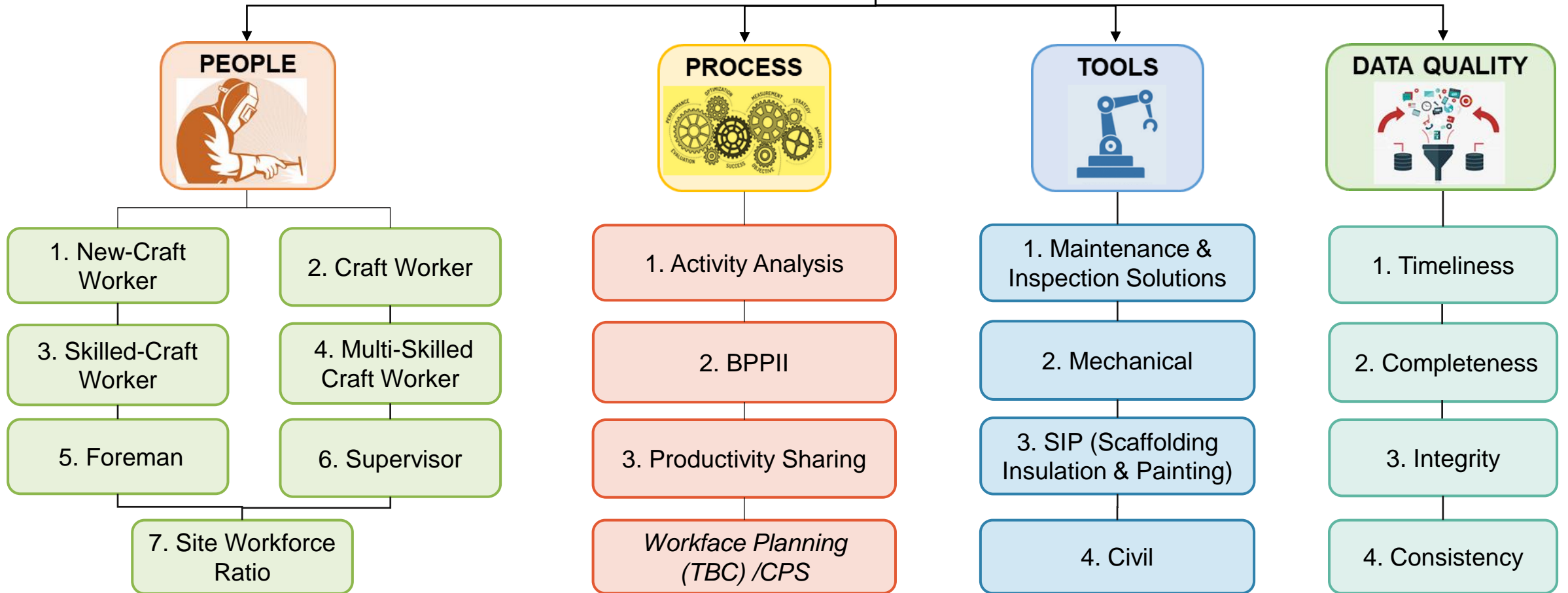
Piloted

Validated

Pillars of PCF



Certification Pillars



Rating Calibration

SCORE	RATING	Index Range	Quintiles
Q1: 0.90 to 1.00	PLATINUM	95% to 100%	1 st Q: BEST in Class
Q2: 1.00 to 1.20	GOLD	86% to 94%	2 nd Q: Excellent-Performer
Q3: 1.20 to 1.50	SILVER	66% to 85%	3 rd Q: GOOD-Performer
Q4: 1.50 to 1.70	BRONZE	50% to 65%	4 th Q: FAIR-Performer
Q5: 1.70 to 2.00	MERIT	34% to 49%	5 th Q: Entry-Level

*The Scores from each category (**PEOPLE + PROCESS + TOOLS + DATA QUALITY**) shall be normalised and the overall percentage shall be derived to calculate the Certification Index of each company.*

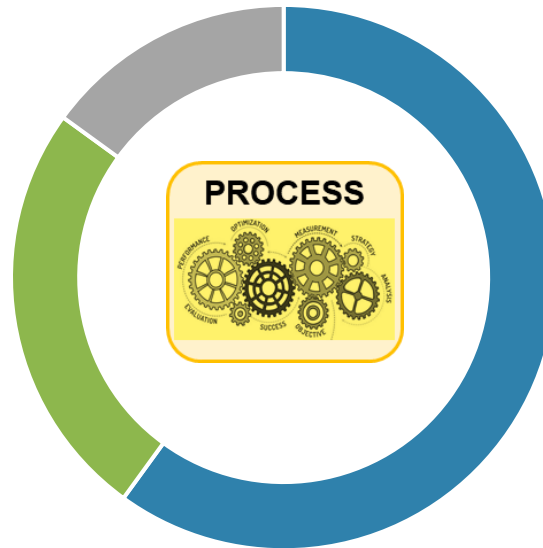
Key Certification Categories

PEOPLE: 100%
(35%)



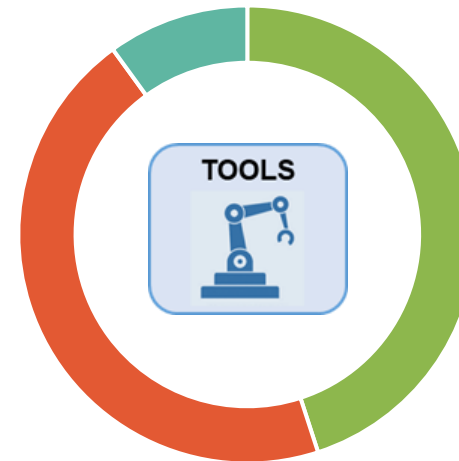
- New Craft Workers
- Skilled Craft Workers
- Foreman
- Craft Workers
- Multi-Skilled Workers
- Supervisors
- Workforce Ratio

PROCESS: 100%
(35%)



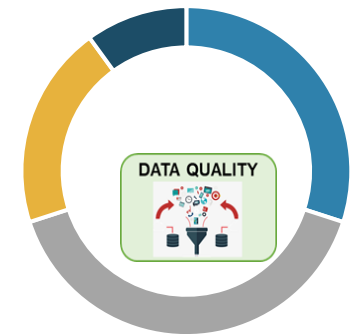
- Activity Analysis
- BPPII
- Productivity Sharing

TOOLS: 100%
(20%)



- Capability
- Field Deployment
- Tool Adoption

DATA QUALITY: 100%
(10%)



- Timeliness
- Completeness
- Integrity
- Consistency

PCF: People



7. Site Workforce Ratio

5. Foreman

6. Supervisor

3. Skilled-Craft Worker

4. Multi-Skilled Craft Worker

1. New-Craft Worker

2. Craft Worker



People Measurement Parameters

- ✓ Years of Experience in the Company
- ✓ Training Qualifications (Internal, ITE, WSQ)
- ✓ Capability and Capacity building

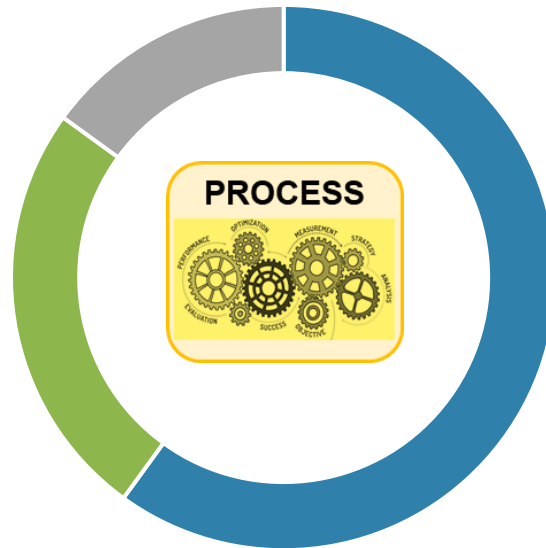
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Productivity Council (2023)

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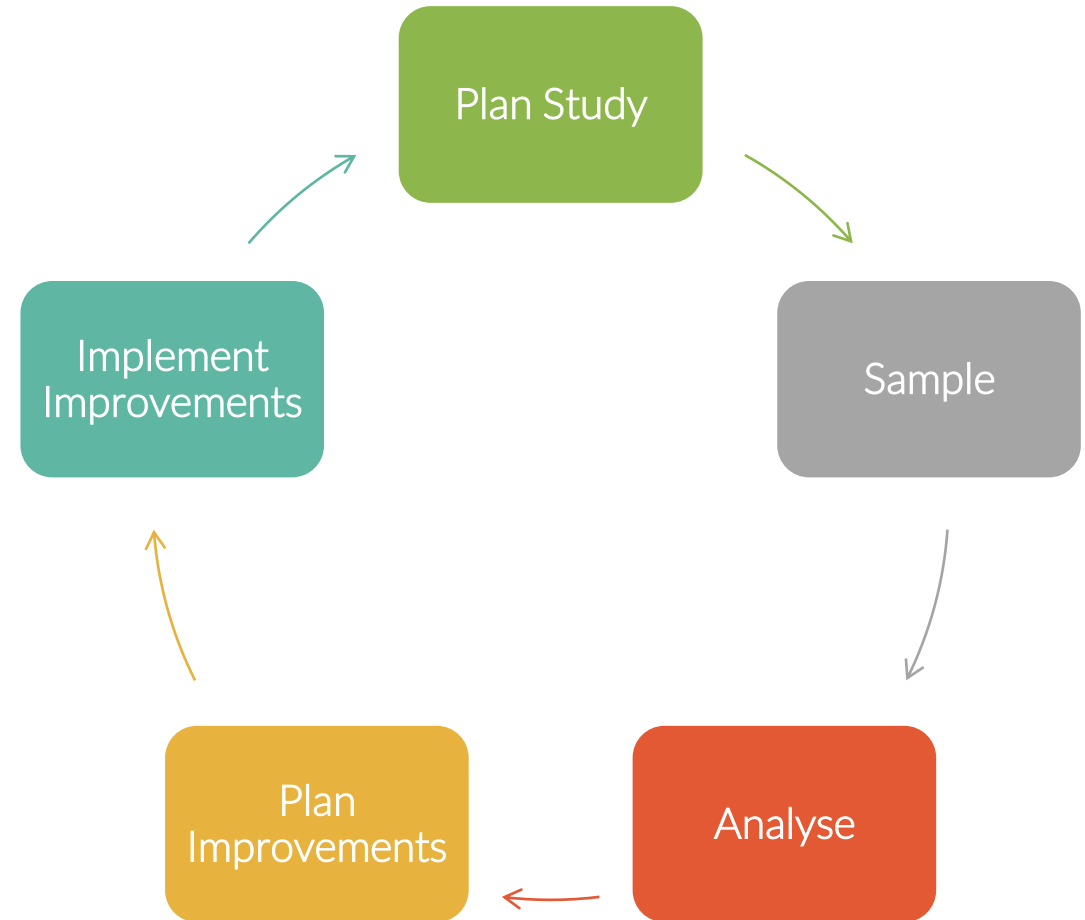
Activity Analysis (AA)

OVERVIEW

Continuous process of measuring and improving the amount of time that workers spend on construction and maintenance activities.

CATEGORIES

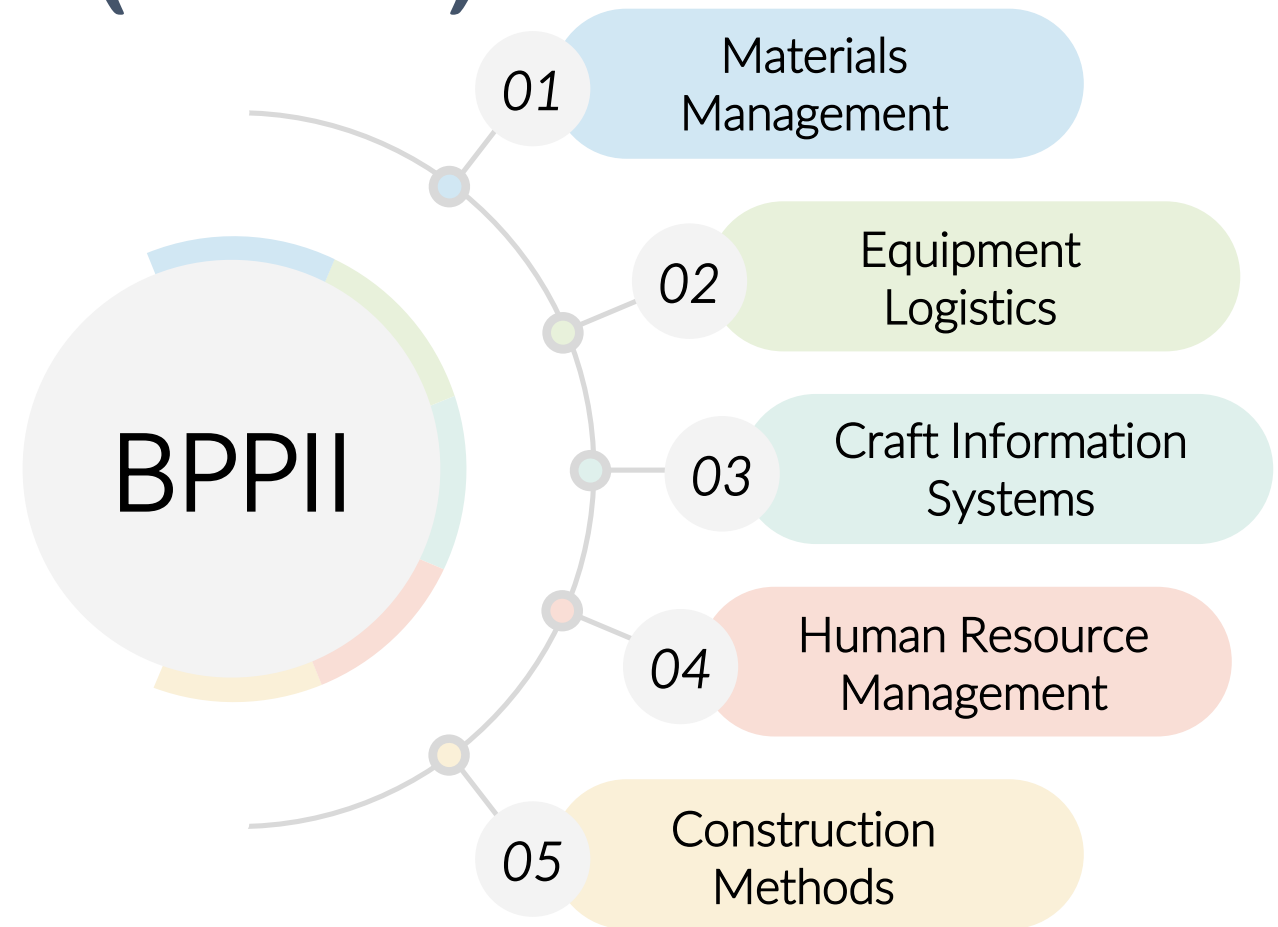
- 1) Direct Work
- 2) Waiting
- 3) Preparatory Work
- 4) Material Handling
- 5) Tools and Equipment
- 6) Travel
- 7) Personal



Best Practices on Productivity Improvement Index (BPPII)

OVERVIEW

BPPII helps Site management teams understand and use practices that improve productivity by measuring the planning and implementation levels of practices that have potential to improve construction productivity.



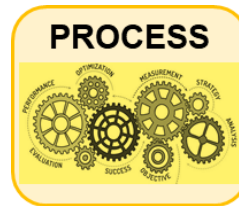
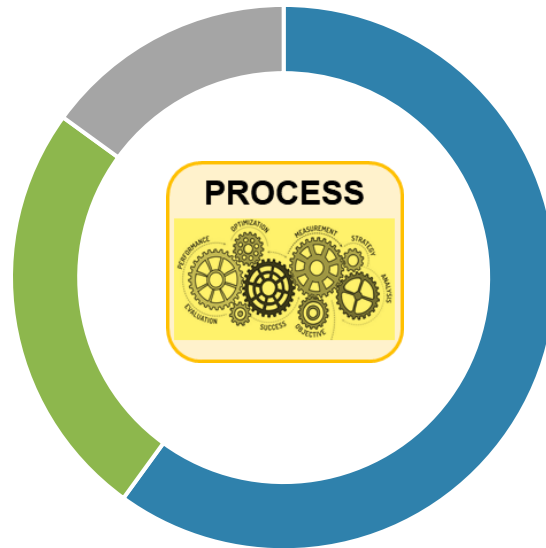
Key Certification Categories

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(35%)



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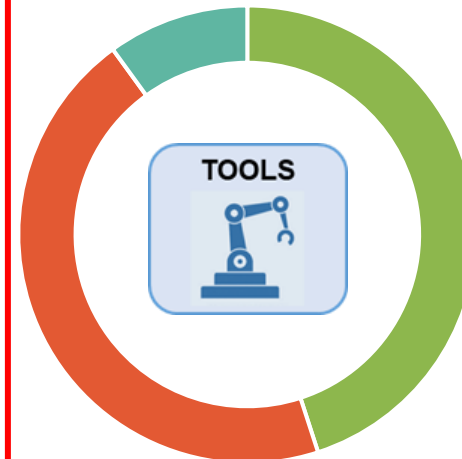
PROCESS: 100%
(35%)



- Activity Analysis
- BPPII
- Productivity Sharing

Productivity Council (2023)

TOOLS: 100%
(20%)



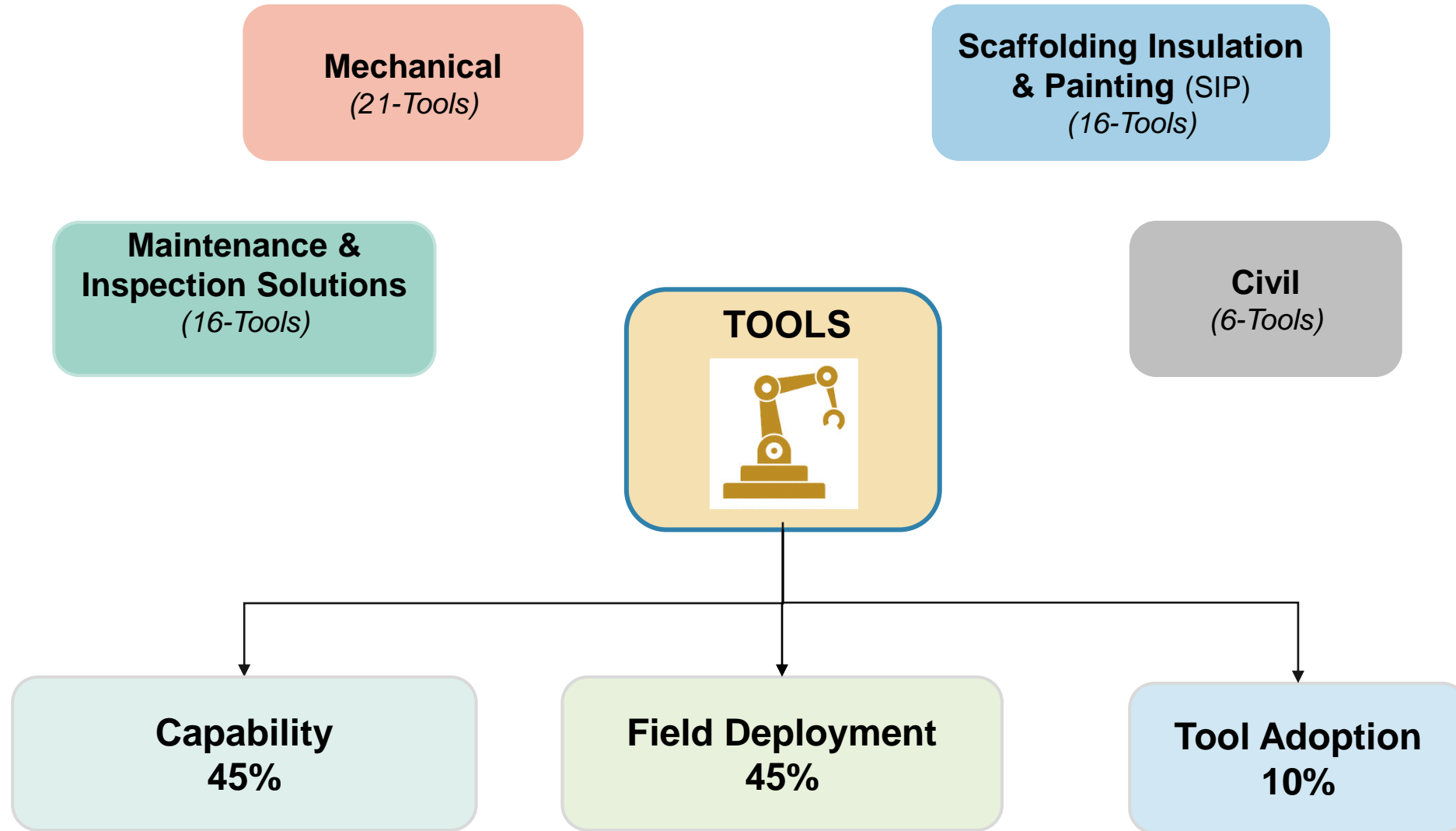
- Capability
- Field Deployment
- Tool Adoption

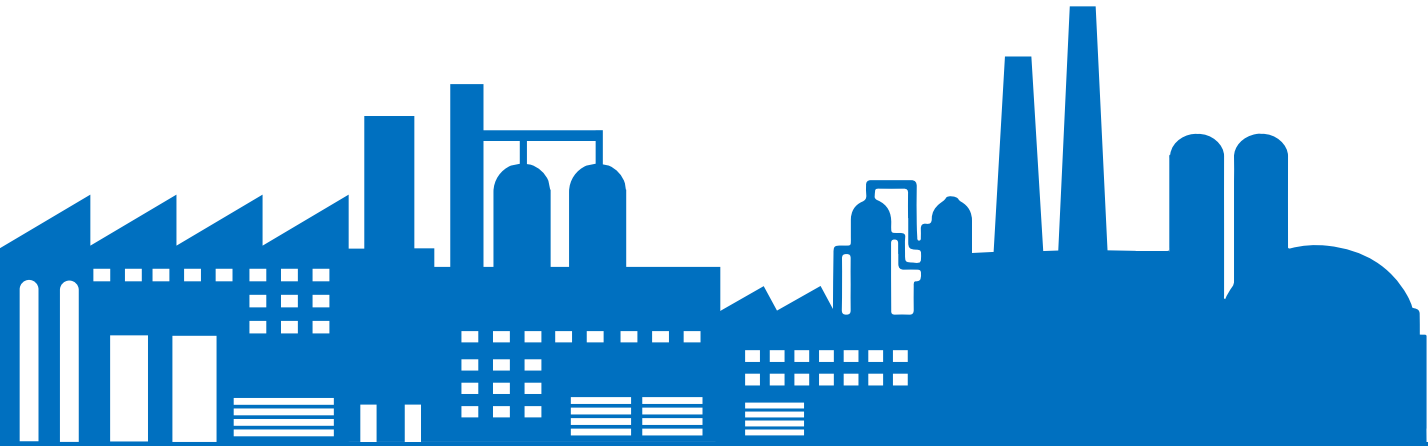
DATA QUALITY: 100%
(10%)



- Timeliness
- Completeness
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- Consistency

Tools: Mechanisation

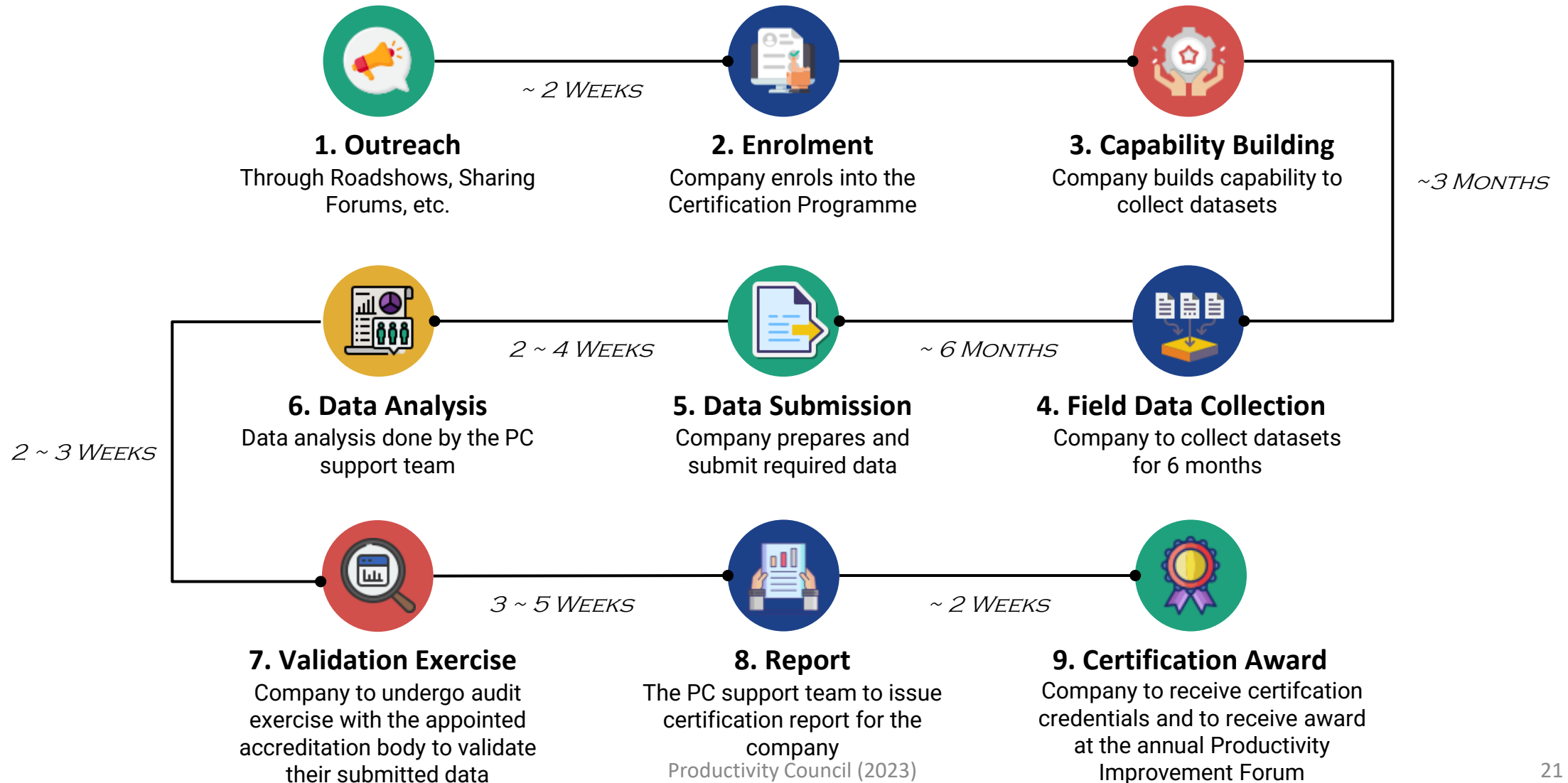


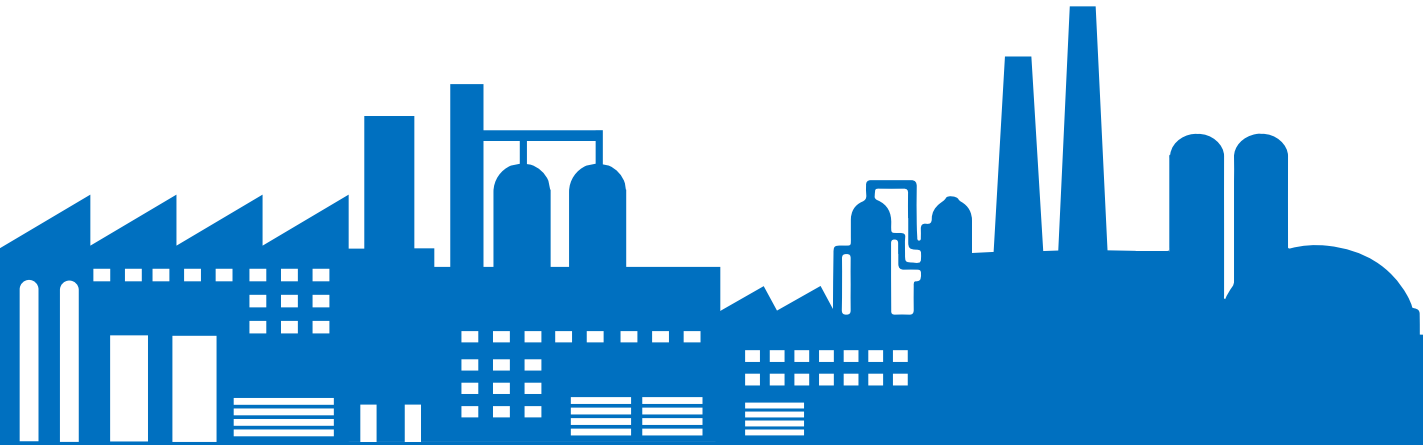


Enabling Certification

What's next?

Adoption Roadmap





Benefits of PCF

Industry Outlook & Adoption Outcomes

Industry Outlook



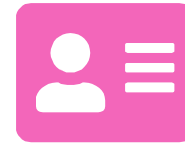
Sustainability

PCF is a systematic approach to achieve quantum improvement in productivity



Incentives*

Recognition of certification as an evaluation criteria for Plant Owners' contracts award



R1 Framework

One of the main qualification pathways for R1 status for lower levy



Global Landscape

Productivity is key to position SG to take advantage of growth opportunities amidst the changing landscape

Lessons Learnt from COVID

- Amplified issues such as our manpower constraints and overreliance on foreign workers
- Highlight the importance of improved productivity and manpower resource utilization

* Depends on individual Plant Owner practices

Expected Adoption Outcomes

Figures derived from past trials and Certification



Direct Work Hours

Incorporation of Productivity Tools and Practices to help monitor, measure, and analyse work at field

Direct work hours: Improved by **8% - 12%** (Ind. Avg.)
BPPII: Site Adoption Improved by **13%**
Mechanisation Field Deployment: Improved by **10%**



Certification Rating

Expected to improve Productivity by a grade, e.g., from Bronze to Silver

Increased productivity translates to more work done which increases revenue



Improved Business

Competitive advantage when bidding for contract awards, especially in events like a Turnaround.

With Certification being a pathway to R1, companies would potentially be paying lower levy for existing R1 workers.

Thank you!

Please feel free to drop ASPRI or pcsect@scic.sg a note if you have any further enquiries!