

[GLOBAL HR FORUM 2020]

POSCO New Collar Talent Development & Smart Factory

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Our Story

1

POSCO Group &
Smart Factory

2

Smart Factory &
HRD Strategy

3

Summary &
Key Issue

posco Virtual Guidance
CHAPTER 1. OPERATION PRINCIPLES

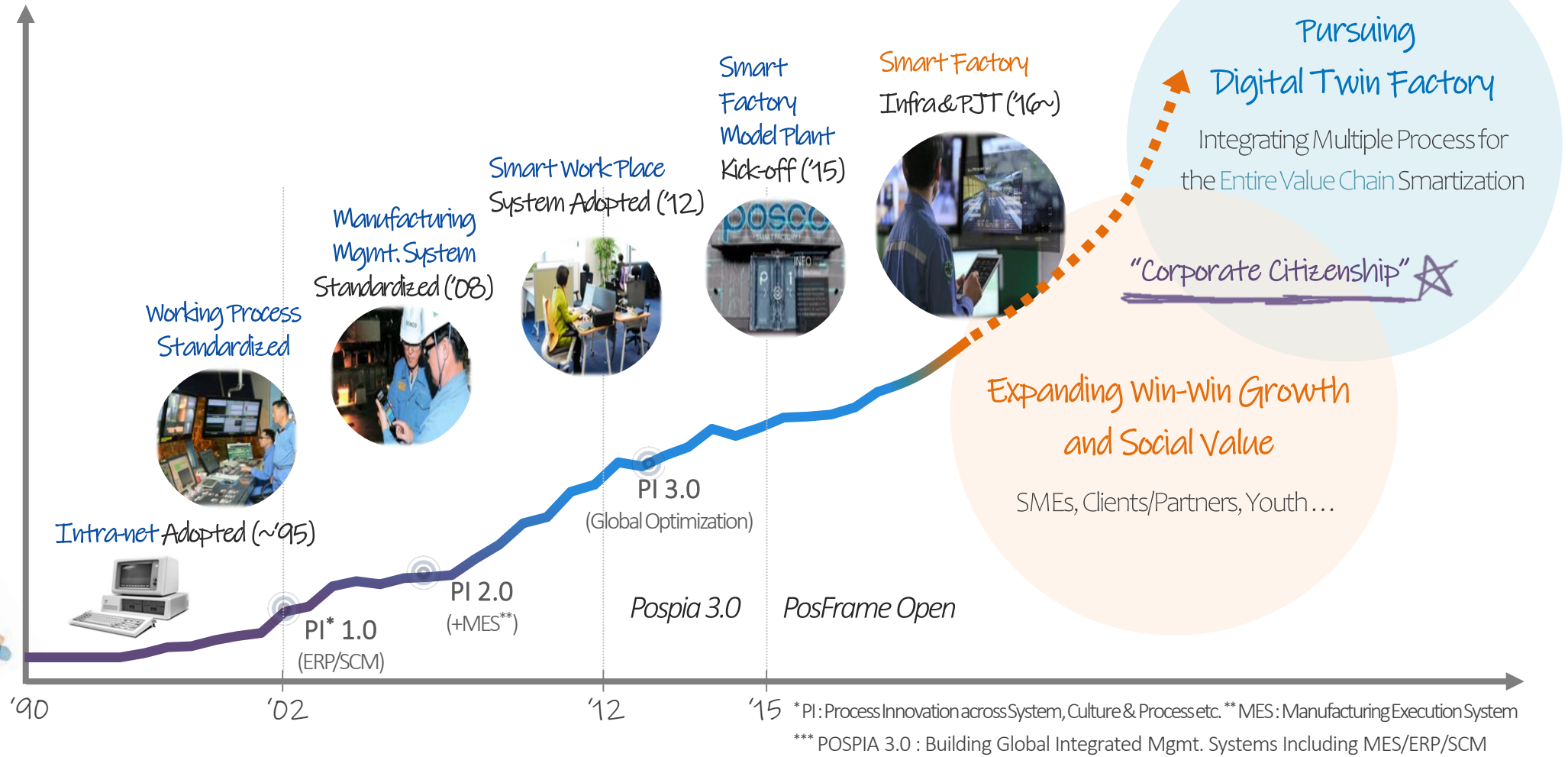
Rolling Mills Specifications

- Work Rolls for Sheet Mills
- Backup Rolls for Sheet Mills
- Rolls for Blooming and Slabbing Mills
- Rolls for Billet Mills
- Rolls for Rail and Structural Mills

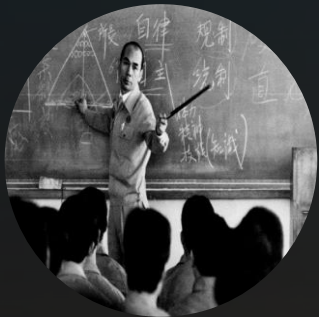
WORK ROLLS CHOCKS

BACKUP ROLL

History of POSCO Smart Factory



50th Anniversary of POSCO & New Challenge



1968

Founded with No Capital,
Technology and Experience

※ Employee Training Center(1969)



(2010~) 2018

The World's Most
Competitive Steel Company

※ Selected by World Steel Dynamics

Next 50 Years?

2019

The World's Lighthouse Factory*

* Selected by the World Economic Forum

"Korea's First Lighthouse Factory"

"Corporate Citizenship"

Go the Extra Mile!

Cross-Process Integration
Smart Factory



Digital Twin Factory



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POSCO Smart Factory

Create Success Stories ('15~)	Best Practice Roll-out ('17~)	Cross-Process Integration ('20~)
<ul style="list-style-type: none"> • Distill Best Practices from Model Plant • Develop the Concept and Build Infra. 	<ul style="list-style-type: none"> • Replicate Best Practices based on Company-wide Consensus • Pursue Optimizing Unit Process 	<ul style="list-style-type: none"> • Nurture New Collar Talent* • Promote the Digitalization of the Entire Value Chain
<p>Establish Data Center / PosFrame**</p> <p>Create Success Cases and Focus on Reducing Operational Deviation</p> 	<p>Upgrade Application of PosFrame</p> <p>Expand Big Data/AI PJTs Focus on Operation Optimization PJTs</p> 	<p>Integrate MES 3.0 ~ PosFrame***</p> <p>Expand the Scope of Projects Focus on Integrating the Entire Process</p> 

** PosFrame : POSCO Smart Factory Data Platform *** End-to-end Smart Quality Assurance System Encompassing Development/Order/Design Manufacturing/Judgment that Leads to Win-win with Clients



[*New Collar]

Domain Expertise + Digital Competency + Open Collaboration

→ Create New Value and Contribute to Society





○ Create Success Stories ('15~)

Infra Create Best Practices from Model Plant, Establish Data Center / PosFrame

HRD

Supporting Key Talents

"How Can We Support Key Talent to Produce Initial PJT Outcomes?"

Nurture Key Experts & Change Agents

- Develop a Digital Workforce through On-site PJTs
- Build a Collaboration System Inside/Outside the Organization

Reinforce Tech Training

- Strengthen Domain Technology Training to Cope with DX
- Support Learning Organizations

+



Best Practice Roll-out ('17~)

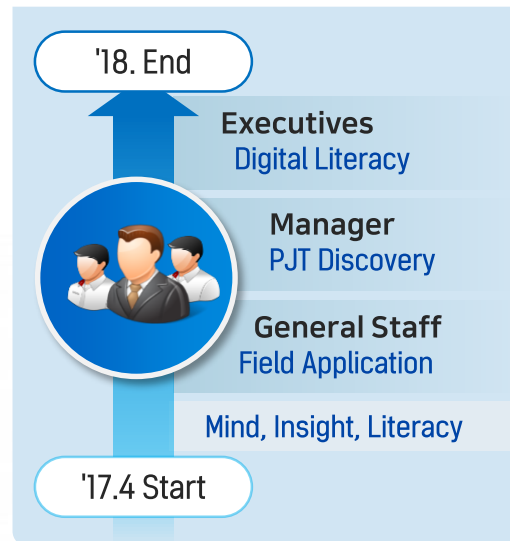
Infra Connect the Entire Process of PosFrame / Pursue Optimizing Unit Process

HRD

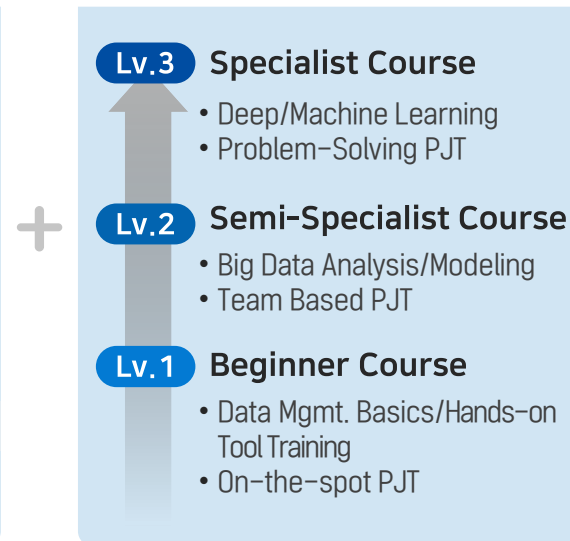
Building Consensus through Intensive Digital Competency Development Program

"How can We Quickly Build Consensus and Nurture AI_X Experts to Lead the Change?"

Company-wide Consensus



DX Program for AI_X



Shop Floor Job Training



○ Cross-Process Integration ('20~)

Infra

MES 3.0 ~ PosFrame Integration / Digital Twin Process Simulation Adoption Readiness

HRD

Nurturing New Collar Talents

"How Can We Promote DX to All Functions and Build it into Our Own Culture?"

NC Learning Program

Lv.4

NC Experts Course
AI_X Algorithm

Lv.3

NC Advanced Course
Deep Learning Algorithm

Lv.2

NC Practical Course
Machine Learning

Lv.1

NC Basic Course
Big Data Analysis Basic

+

Leadership Training

DX Leadership & Literacy

- Data-Driven Decision Making W/S
- Digital Leadership/Literacy W/S

Way of Work/Culture

- Design Thinking W/S
- Data Storytelling, Digital Citizenship
- RPA with a.Works*

+

On-site PBL Program

PBL Using AI/Big Data

- Convergence Tech + PBL + Collaboration W/S
- Action Learning PJT linked to Innovation Agent Program

On-site Tech. Training

- Maker's Open Lecture(MOL)
- PLC, IoT, Network etc.

* a.Works : POSCO ICT's Software for RPA



Providing Customized Learning to Foster New Collar Talent

Adaptive Learning

1

Access to HRD Platform for Contents Search



Off-Line +

(New Collar,
Leadership,
Tech Training...)



On-line : Theory



Off-line : Collaboration

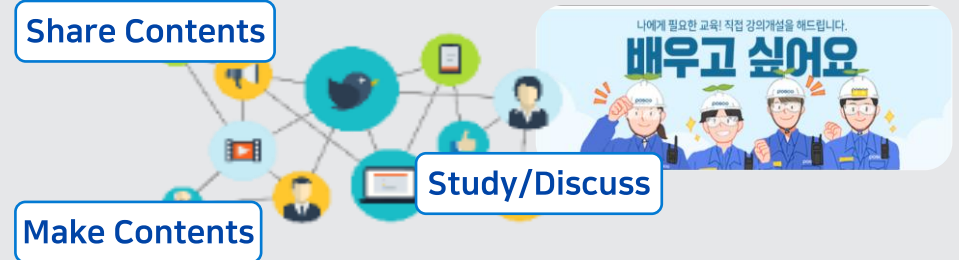
Using Technology to Solve Business Problems

Field Problem-Solving Learning

3

2 Self-directed, Mutual Learning

Create and Share Contents amongst Members



Apply Knowledge to Work / PJT



Follow-up Training

Provide Feedback/Feedforward to Apply Knowledge to Work

4 Learning Transfer

Efforts to Solve Social Problems and Share Values

POSCO Youth Dream

Educational Program to Support the Dreams of Youths

Plan to Foster 5,500 Persons in 5years ('19~'23) : [AI/Big Data Academy](#), Employment Preparation Academy, Start-up Incubating School



- Free 12 weeks Training Camp
- Link to POSTECH Research Internship /POSCO Group Recruitment Program
- Basic Theories + PJT Based Learning



AI/Big Data Academy

- Currently **24%** completed
- **43%** Succeeded in getting a job in AI field

Junior AI Class

For Elementary Students
in Local Community



Support for SMEs

Share Values to Advance
Biz Ecosystem



- LV.1 : Improve Facility Efficiency
- Lv.2 : Implement Smart Factory System



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Summary

Develop New Collar Talent to Fulfill “Corporate Citizenship, POSCO” for the Next 50 Years

1
Promote Digital Efficacy
by **Propagating Best Practices**
through the Smart Factory
Model Plant

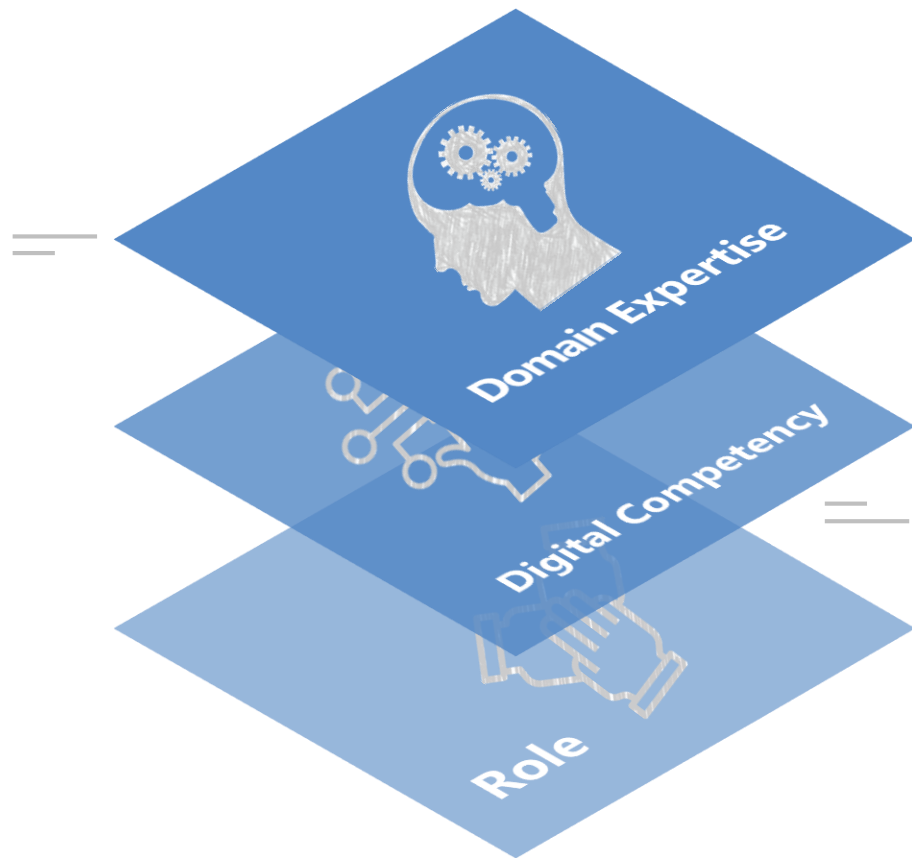
2
Strive to **Build Initial Consensus
and Momentum**
by Providing Learning System
for All Members

3
Establish NC Fostering System
with Open Collaboration
and Support End-to-end
Integration Project

Success Factor



Wrap-up



What Questions must We ask for DX?

Q01

Which AI PJTs need to be Undertaken to Improve Ongoing Business?

Q02

What Level of AI Skills do Domain Experts need for On-site Application?

Q03

What should People do in the AI Era? e.g. Data Standardization/Preprocessing...

※ Checklist for Smart PJT Screening (POSCO's Case)



Index		Item
Business Case	Problem Definition	Can you check the cause of the problem, limitations of current methods, and change after the project?
	Goal Setting	Did you set project goals linked to your department goals so that you can compare before and after improvement?
Technological Value	Project Details	Is the part about using automation/intelligent technology the core content of the project?
	Strategic Alignment	Do the project details align with the Smart Factory strategies and visions of each department?
Effectiveness	Profitability/ Effectiveness	<p>[Quantitative] Is the project worth carrying out with sufficient expected benefits compared to costs?</p> <p>[Qualitative] Is there enough of an effect in non-financial improvement and importance/influence/urgency of the project?</p>
	Feasibility	Can you carry out the project within the deadline considering the details (similar cases, tech. status, personnel setup, etc.)?
Applicability	Sustainability	Can you produce results continuously and use them in other tasks after the project?
	Replicability	Is there a possibility of replication between the same or similar process after the project?

※ Separate criteria are applied for management-related projects

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Thank You !

