IRPC Operational Excellence Management System

Principles

Leaderships Message

"Evolution Operational Excellence Management System or OEMS as IRPC's core management system, together with active engagement with our stakeholders, deploy Manage Risks, Changes and Safety relevant control measures to reduce risk and demonstrate social responsibility will enable our operations to move forward to become a high-performance innovation and digitized organization in a competitive business arena with sustainable growth."

(Mr. Chawalit Tippawanich)
IRPC President & Chief Executive Officer

OpEx Code of Conduct

The OpEx Code of Conduct : P-E-O-P-L-E and 7Rs is set of rules and expected behaviors for all IRPC's employees, contractors, and agents acting on behalf of IRPC.

Always,

P **rotect** our people, our assets, our community

E **ngage** our stakeholders, enhance capabilities, share best-practices

O **perate** by the rules, adhere to procedures in all situations

P **artner** with integrity, care, share, respect each other

L **ead**, aim high, believe you can do better, have confidence

E **volve** through innovation, be open to ideas and solutions

Figure CC.1 : P-E-O-P-L-E OpEx Code of Conduct

7Rs Principle

Reduce : Minimize the amount of material and energy used during the whole of a product life cycle. Use less of something.

Reuse : Take an exiting product that 's become waste and use the material or parts for another purpose, without processing it. Put into action or service again.

Recycle : Take an existing product that has become waste and re-process the material for use in new product. Re-use the item and create something else with it.

Repair : Repair products rather than buy new ones. When a product breaks down or doesn't function properly, fix it.

Refuse : Avoid buying products that are not sustainable or recyclable. Don't accept a product at all if you don't need it or if it's environmentally or socially unsustainable.

Return : Save the Earth or pay as you throw. Don't dump it, donate it. Thriving business, thriving communities.

Rethink : Think about how to reuse a product or its materials in the current lifestyle and the way to design and make.

Figure CC.2 : 7Rs OpEx Code of Conduct

OpEx Architecture

The IRPC OpEx architecture groups the key Operational Excellence tools and enablers to achieve Top-Quartile performance.

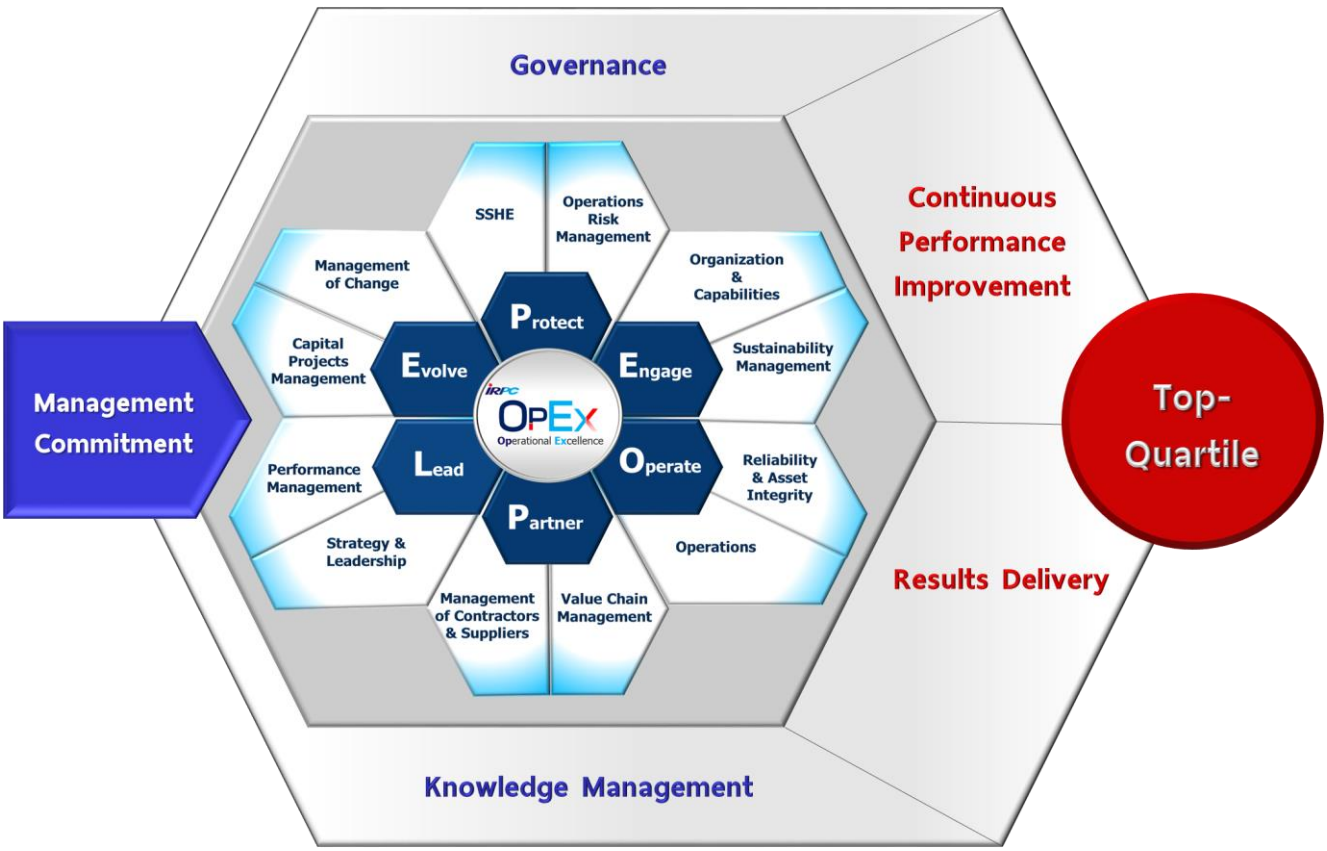

Figure OA: IRPC OpEx Architecture

Operational Excellence Management System (OEMS)

IRPC's Operational Excellence Management System (IRPC OEMS) is a commitment to the way of operating in all IRPC businesses across value chain. Wherever, we operate, we comply with the elements of our management system

Figure OEMS: IRPC OEMS

1 SSHE

IRPC is committed to achieving the highest standards of Safety, Security, Health, and Environmental performance in all aspects of business in line with our SSHE standards.

1.1 SSHE Policy
1.2 Visible Leadership
1.3 Resources
1.4 Management Review
1.5 Security of Personnel and Assets
1.6 Occupational Health
1.7 Environmental Management
1.8 Incident Management
1.9 Emergency and Crisis Management
1.10 Employee Engagement, Behavior, and Culture
1.11 Inspections and Audits
1.12 Legal & regulatory requirements

SSHE Requirements Embedded in 11 other Elements.

SSHE Policy (QSSHE Policy) is applicable to all IRPC Businesses across value chain including production, products, services, distribution and logistics, and companies 100% owned by IRPC, Subsidiaries and Joint Ventures. Newly acquired businesses or sites must conform to IRPC's Policy within 24 months of an acquisition or sooner. Moreover, IRPC expects business partners, such as associate companies or other investments, non-managed operations, where we do not have operating responsibility, as well as principal contractors, suppliers and others licensees, outsourcing partners with whom we have a substantial involvement, to maintain high standards.

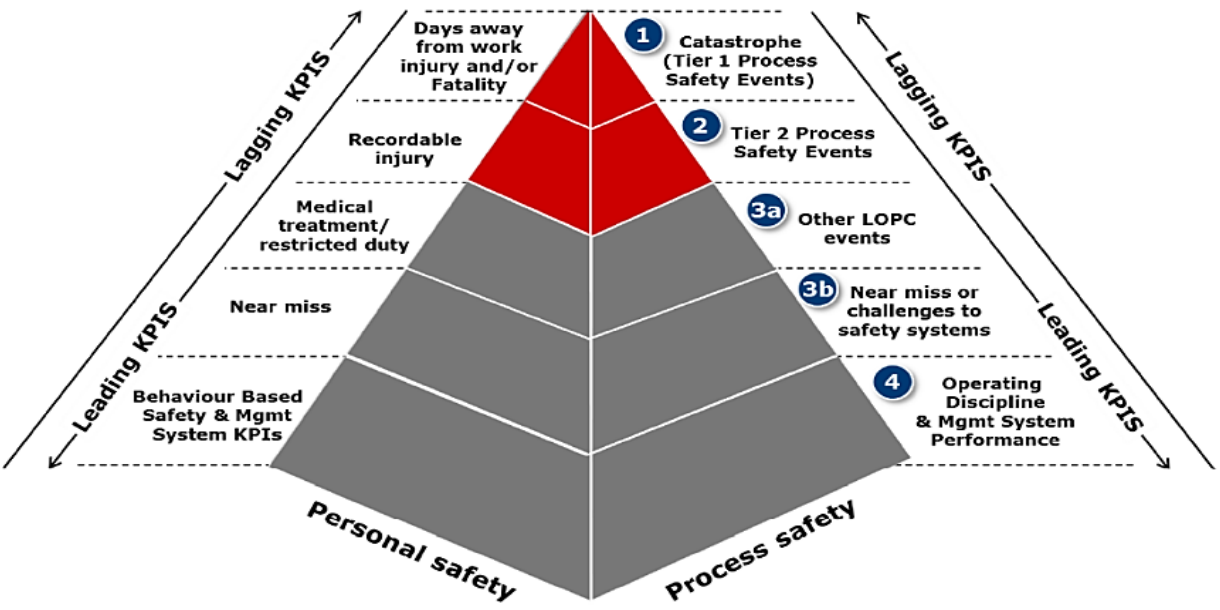

Figure 1: Process safety and personal safety KPI mapping

2 Operations Risk Management (ORM)

IRPC operations risk management identifies and manages all operations risks to minimize the impact on the organization to as low as reasonably practicable (ALARP).

2.1 Risk Management System
2.2 Risk Assessment
2.3 Risk Treatment
2.4 Documentation, Monitoring, and Review
2.5 Communication and Consultation

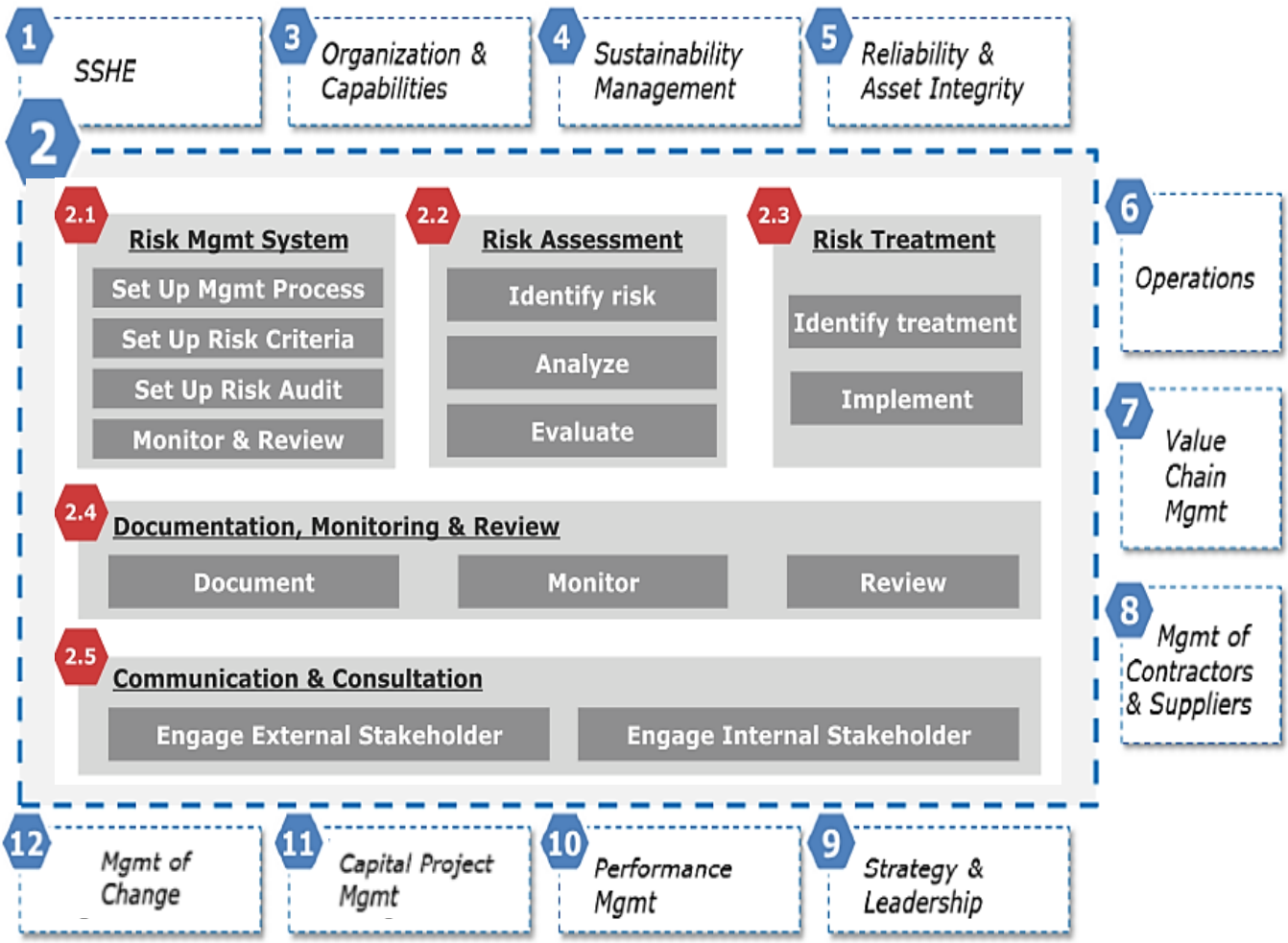

Figure 2: Operations risk management framework

3 Organization & Capabilities (O&C)

IRPC's organizational structures in operations are designed for effective and efficient decision-making. Operations capabilities are enhanced through systematic development of competencies and skills, sharing of best-practices, and effective knowledge management.

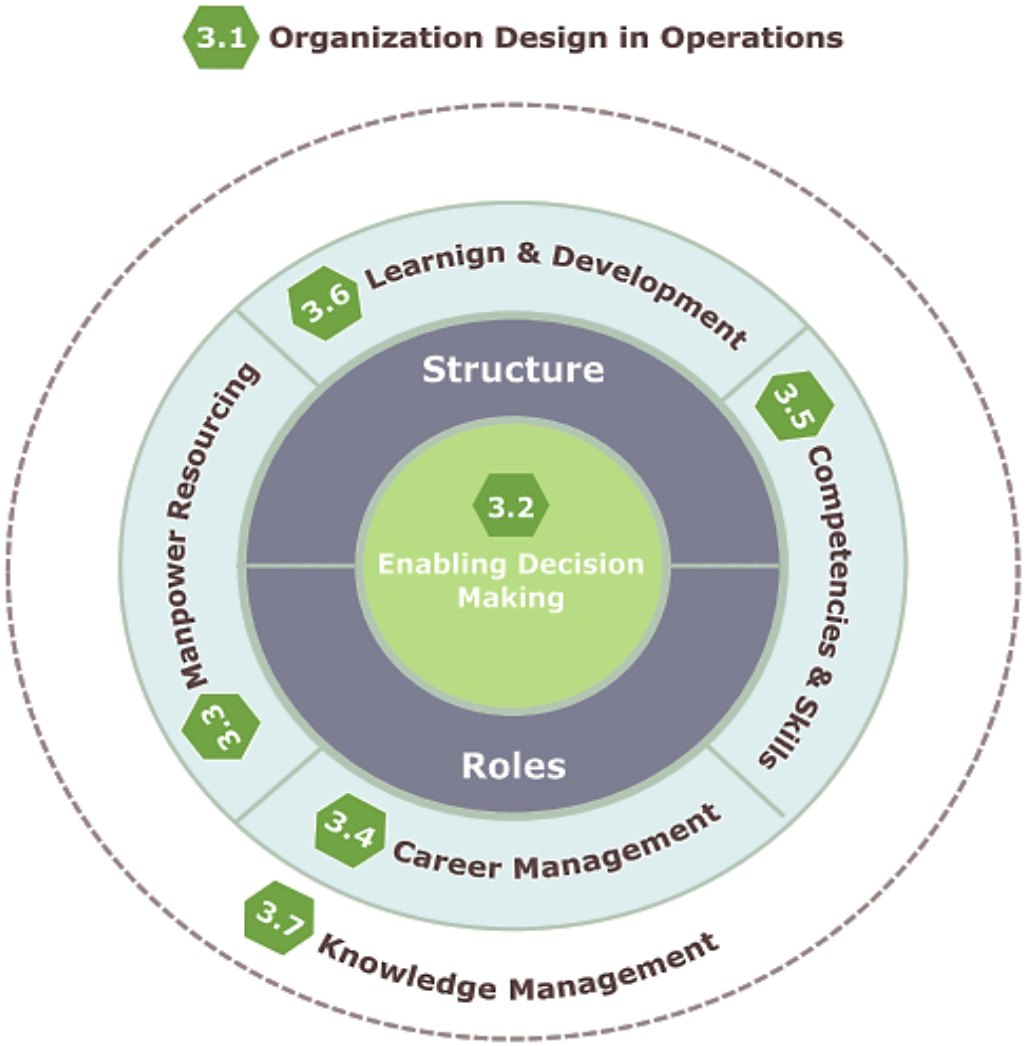

Figure 3: IRPC OEMS organization and capability framework

4 Sustainability Management (SM)

IRPC is committed to working in a socially, environmentally, and economically sustainable manner to maintain a license to operate while balancing a diverse range of stakeholders, in order to assure sustainable business growth.

4.1 Organizational Governance
4.2 Human Rights
4.3 People
4.4 Security, Safety, Health, and Environment
4.5 Fair Operating Practices
4.6 Corporate Citizenship
4.7 Supply Chain Management
4.8 Product Stewardship
4.9 Reporting and Reputation
4.10 Stakeholder Engagement

Figure 4: IRPC sustainability management framework

5 Reliability & Asset Integrity (RAI)

IRPC always ensure that asset, facility, and equipment inspection and maintenance activities are systematically planned and executed to ensure the highest standards of reliability and asset integrity that guarantee safe, reliable, sustainable, and cost-effective operations throughout its lifecycle.

5.1 Reliability and Asset Integrity Strategy
5.2 Maintenance Approach
5.3 Reactive Maintenance
5.4 Pro-active Maintenance
5.5 Maintenance Planning and Execution
5.6 Autonomous Maintenance
5.7 Turnaround Management
5.8 Maintenance Review and Improvement

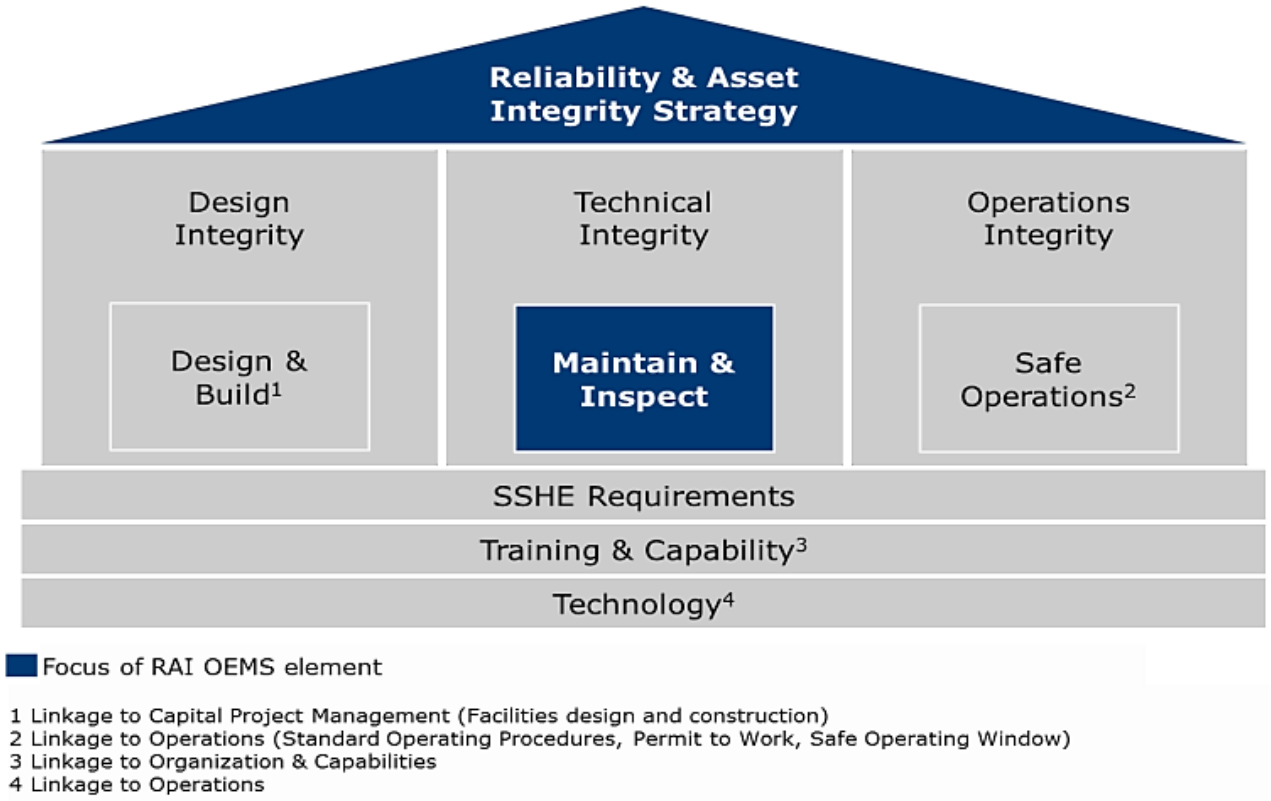

Figure 5: IRPC reliability and asset integrity framework

6 Operations (OPS)

IRPC operates with a focus on preventing injury to people and harm to the environment. Operations are committed to ensure safe and optimized operations over the lifecycle of asset, facilities, and equipment.

Figure 6a: Operations strategy pyramid

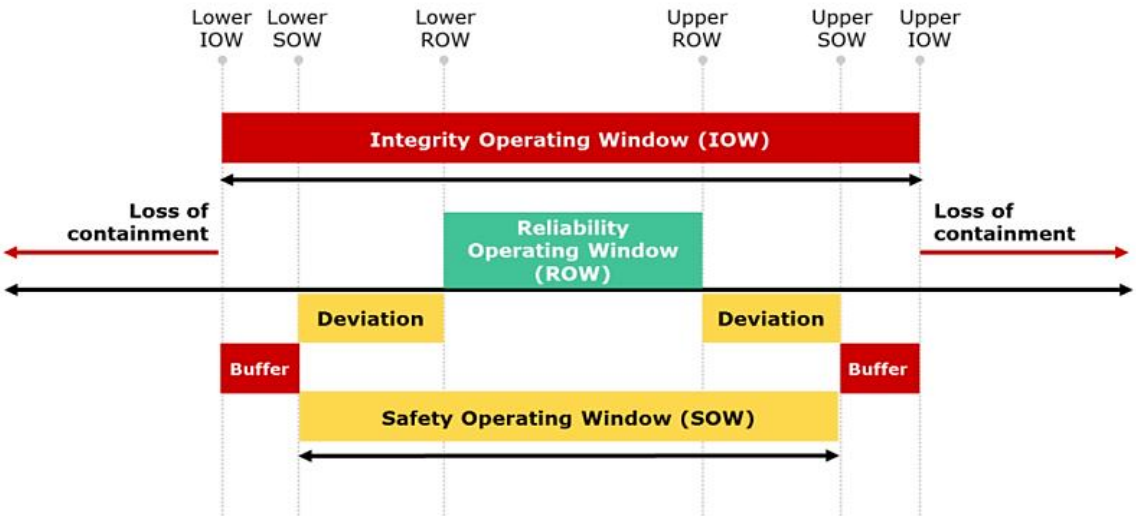

Figure 6b: Three levels of operating windows

7 Value Chain Management (VCM)

IRPC manages the end to end value chain to deliver quality products that always meet customer expectations whilst satisfying business requirements, optimizing operations and inventories.

7.1 Asset Operations Planning

7.2 Materials and Inventory Management

7.3 Logistics

7.4 Quality Management

Figure 7: value chain management framework

8 Management of Contractors & Suppliers (MCS)

IRPC ensure that materials and services provided by contractors and suppliers comply with all contractual requirements, policies, standards, and business objectives defined at company level.

8.1 Procurement and Contract Strategy

8.2 Category Management

8.3 Operational Procurement:

8.4 Management of Contractors

8.5 Supplier Relationship Management

Figure 8: Management of contractors and suppliers framework

9 Strategy & Leadership (S&L)

IRPC's leaders are committed to safe, reliable, sustainable, and cost-effective operations. They maximize synergies across PTT Group companies to achieve and sustain top-quartile performance.

9.1 OpEx Vision
9.2 Strategy Planning
9.3 Strategy Implementation
9.4 Leadership Behaviors
9.5 Leadership Commitment

Figure 9: Relationship between OpEx Vision, OpEx Leadership, and OpEx Strategy

10 Performance Management(PM)

IRPC aspires to achieve and sustain top-quartile performance. Performance management drives progress towards top-quartile performance through assessment, benchmarking and prioritized implementation of preventative, corrective, and improvement initiatives.

10.1 Top-Quartile Plan:

10.2 Performance Targets

10.3 Performance Accountability

10.4 Performance Monitoring and Reporting

10.5 Performance Benchmarking

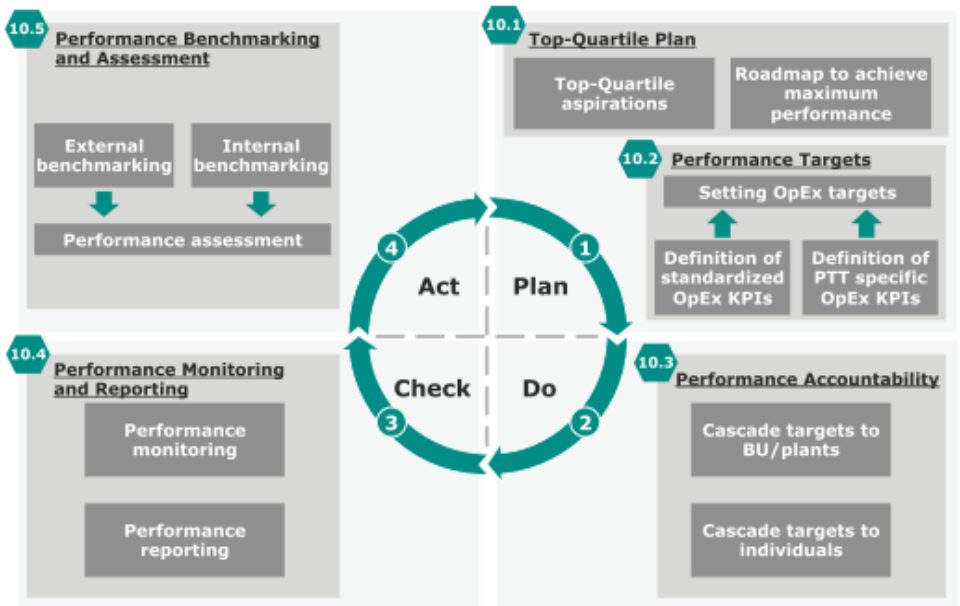

Figure 1oa: Performance management framework

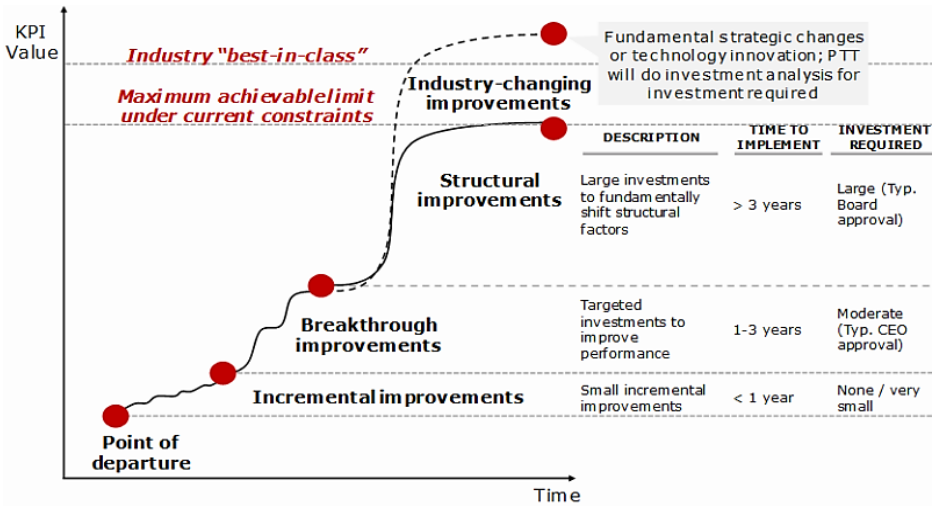

Figure 1ob: Types of change to achieve Top-Quartile performance

11 Capital Project Management(CPM)

IRPC' capital project management process selects and progresses the right projects through disciplined decision-making and ensures projects are delivered safely, to specification, on time, and within budget.

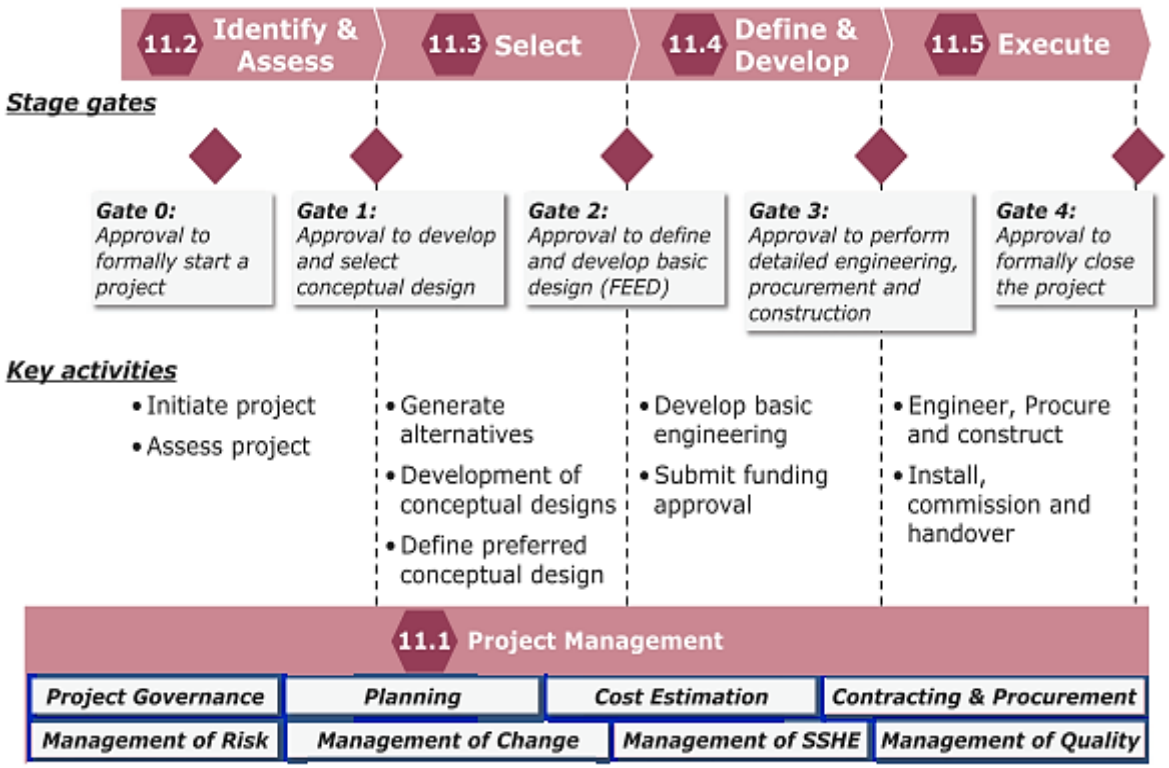

Figure 11: Stage-gated capital project management process

12 Management of Change (MoC)

IRPC is committed to ensure that all temporary or permanent changes in operations, administration, or organization are systematically managed to a level of risk that remains as low as reasonably practicable (ALARP).

12.1 Management of Change System
12.2 Initiation
12.3 Review
12.4 Approval
12.5 Implementation
12.6 Close-out

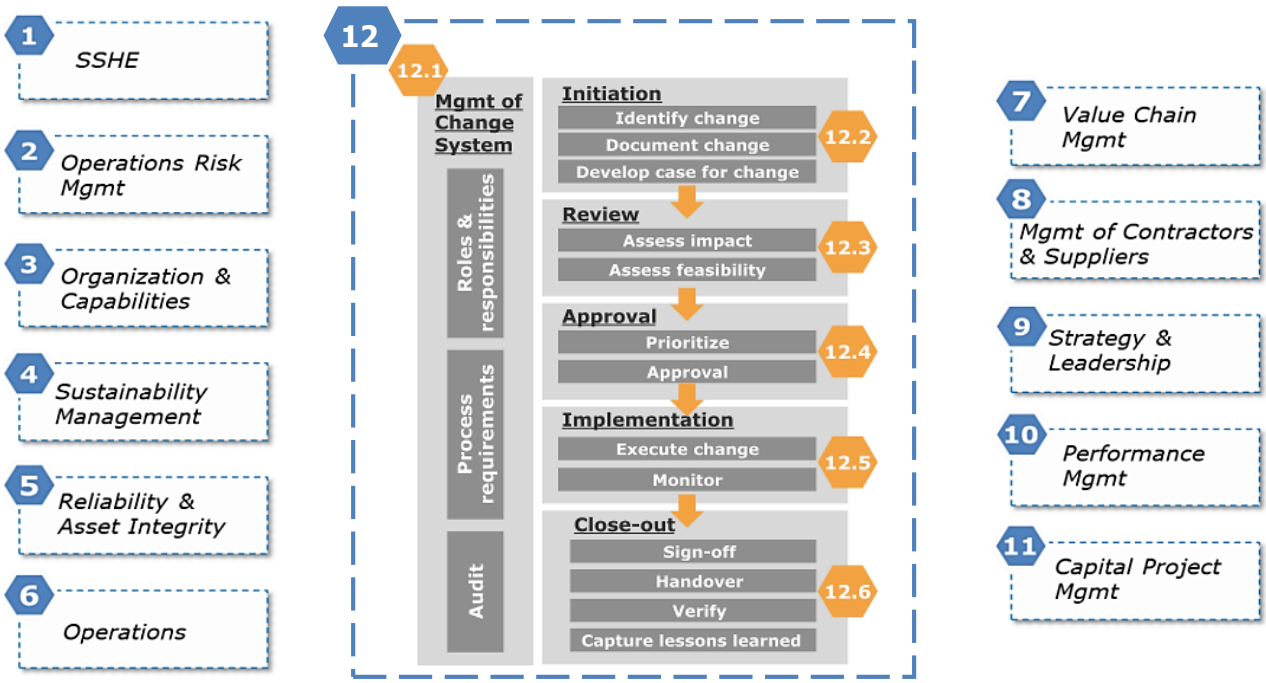

Figure 12a: Management of change framework

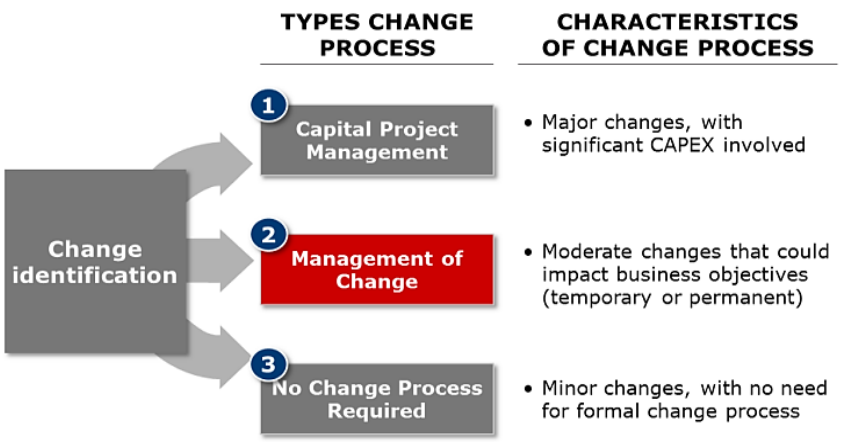

Figure 12b: Types of change process

Intellectual capital

Intellectual capital at IRPC consists of best-practices and innovations (including new technology and intellectual property) to improve operations and create a competitive advantage. The creation of intellectual capital is supported by knowledge management. Knowledge management comprises of the process and enablers to create, capture, organize, and transfer knowledge.

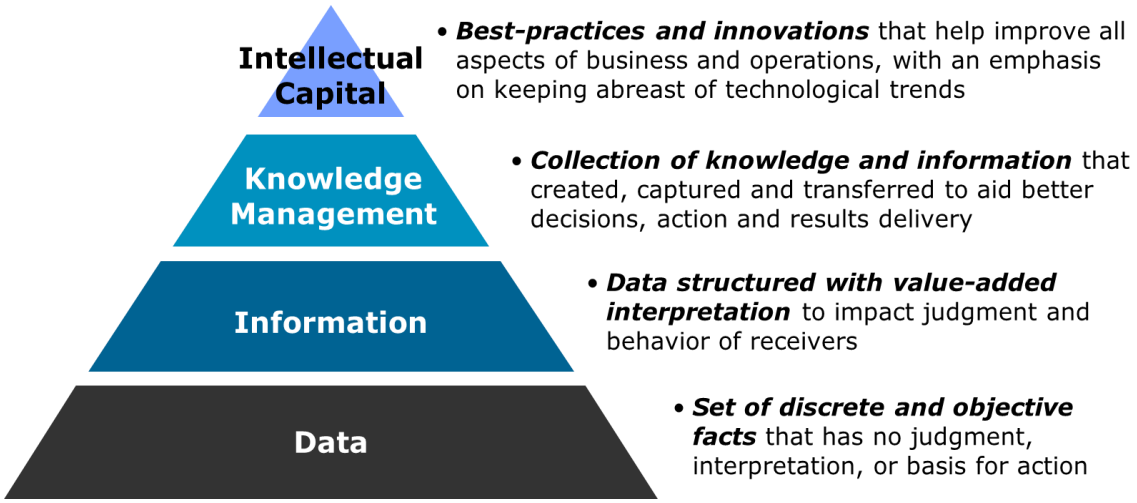

Figure IC.1: Hierarchy of intellectual capital

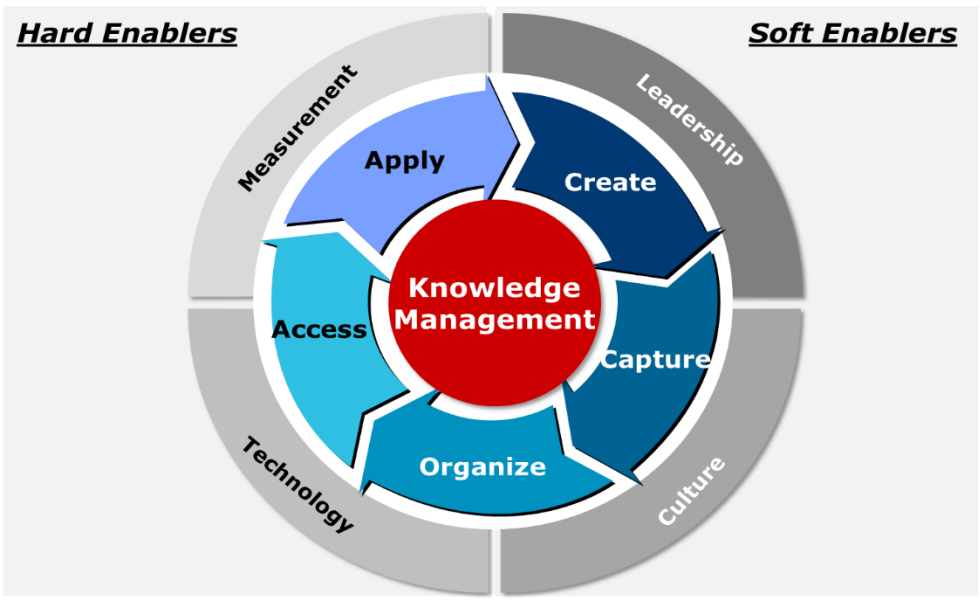

Figure IC.2: OpEx's knowledge management framework

RESULTS DELIVERY (RD)

Results Delivery is a cohesive and integrated approach applied during OpEx implementation to systematically identify and mitigate key implementation risks. It ensures changes in behavior and resistance to change are carefully managed.

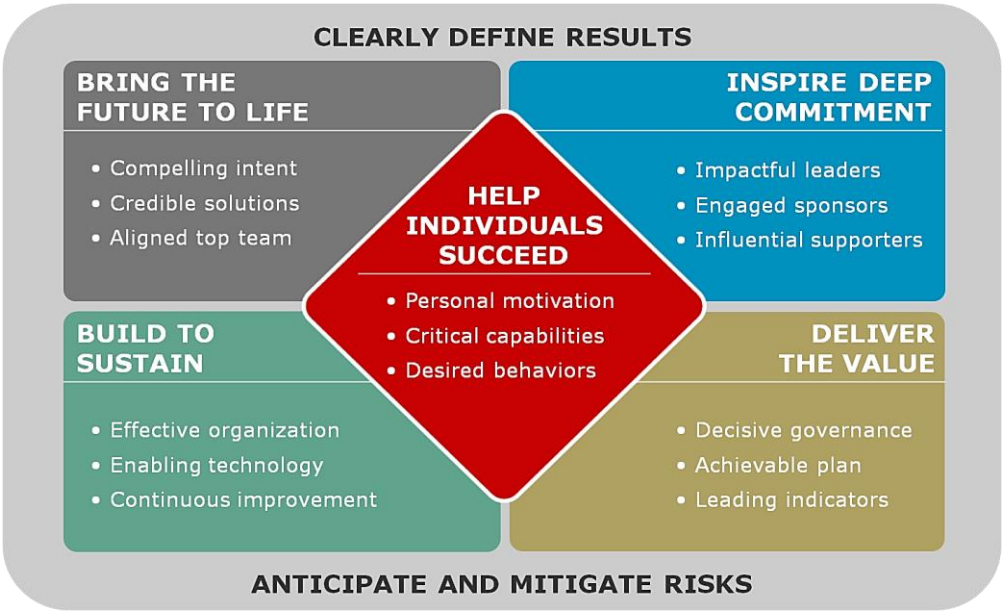

Figure RD.2: Results Delivery Framework

How good looks like if Results Delivery is executed within OpEx program

AIM: Bring the Future to Life	**LEAD:** Inspire Deep Commitment	**ACT:** Help Individuals Succeed	**GUIDE:** Deliver the Value	**EMBED:** Build to Sustain
Employees understand and align on potential OpEx benefits for PTT Group.	Stakeholders within PTT Group identified. Commitment built from top down along the sponsorship spine.	Consistent communication and evaluation system implemented within PTT Group to manage change.	OpEx implementation sequenced for optimized results and put into action. Critical risks identified and mitigated.	Feedback actively managed. Continuous improvement embedded within PTT Group.

CONTINUOUS PERFORMANCE IMPROVEMENT (CPI)

CPI is a systematic method that drives sustained progress towards Operational Excellence, while ensuring every individual has the tools and motivation to support this journey.

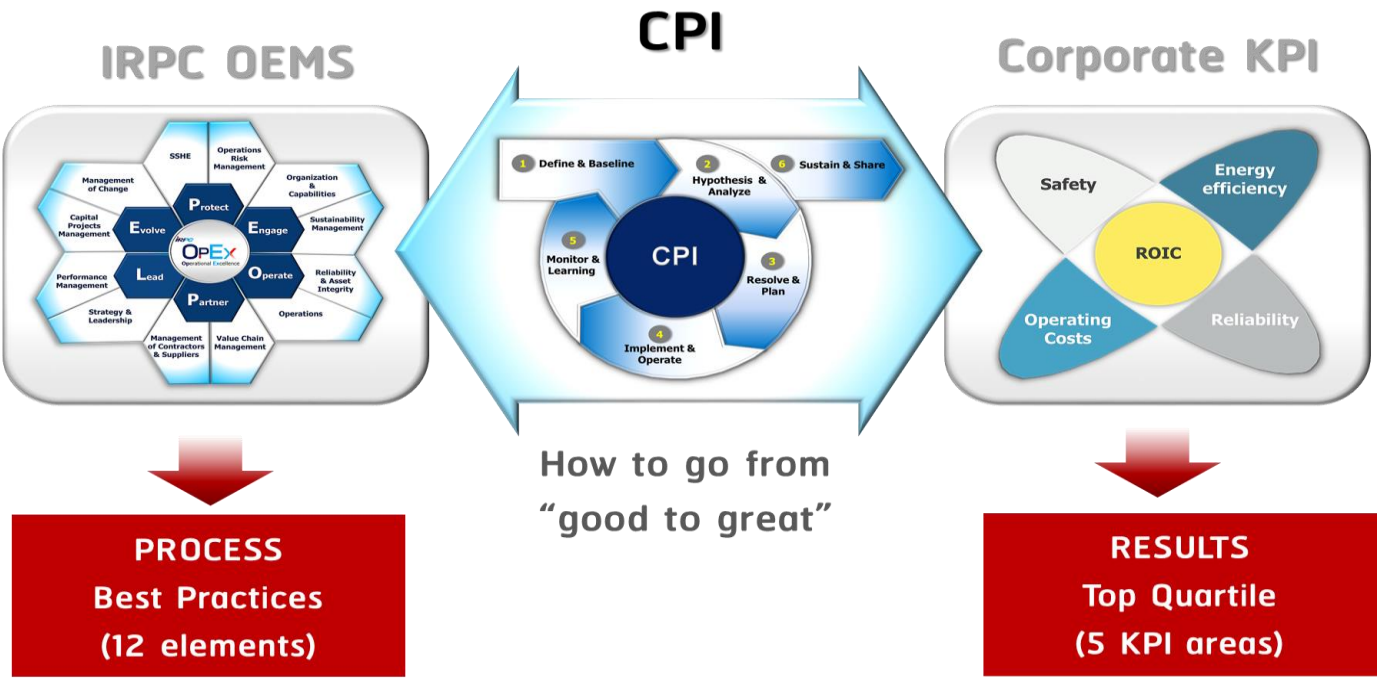

Figure CPI.1: CPI as the link between OEMS and IRPC Corporate KPIs

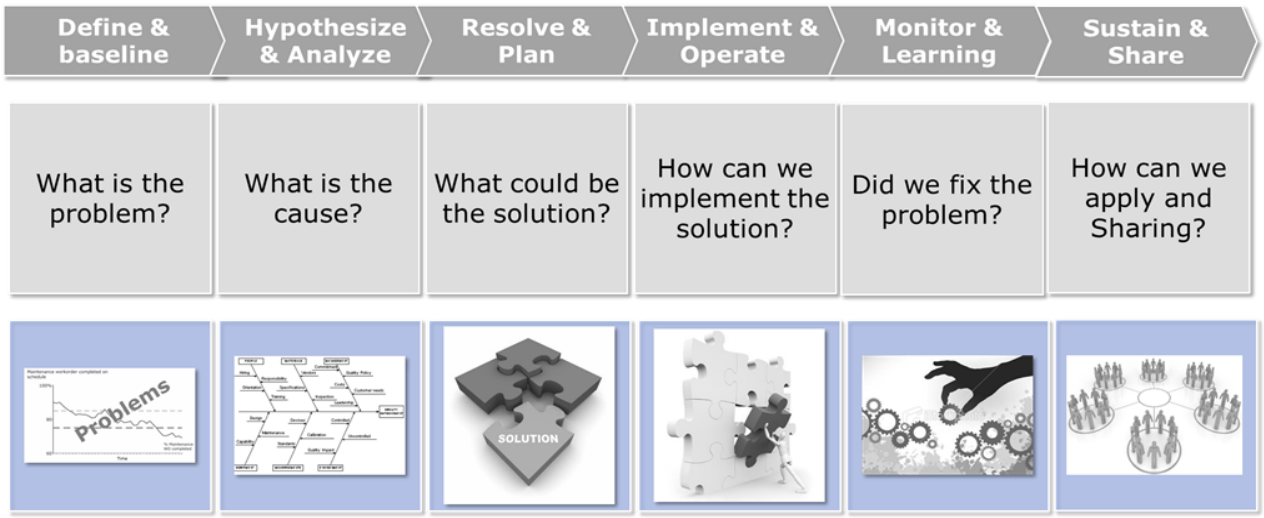

Figure CPI.2: CPI process phases

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