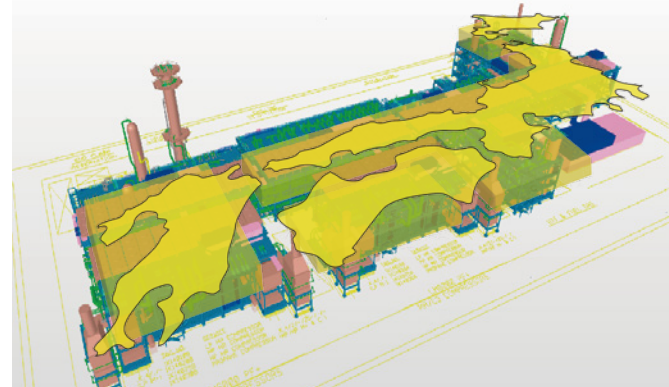


MODULAR APPLICATION OF CHIYODA LNG-Xm

What is CHIYODA LNG-Xm JAPAN™?

CHIYODA LNG-Xm JAPAN™ is a modularized version of **CHIYODA LNG-X®**, designed to provide the fastest Project delivery with the lowest CAPEX.

The concept, developed from Chiyoda's unparalleled expertise and experience in global LNG Plant engineering and construction, to minimize site work and optimizes the "Plug & Play" model.

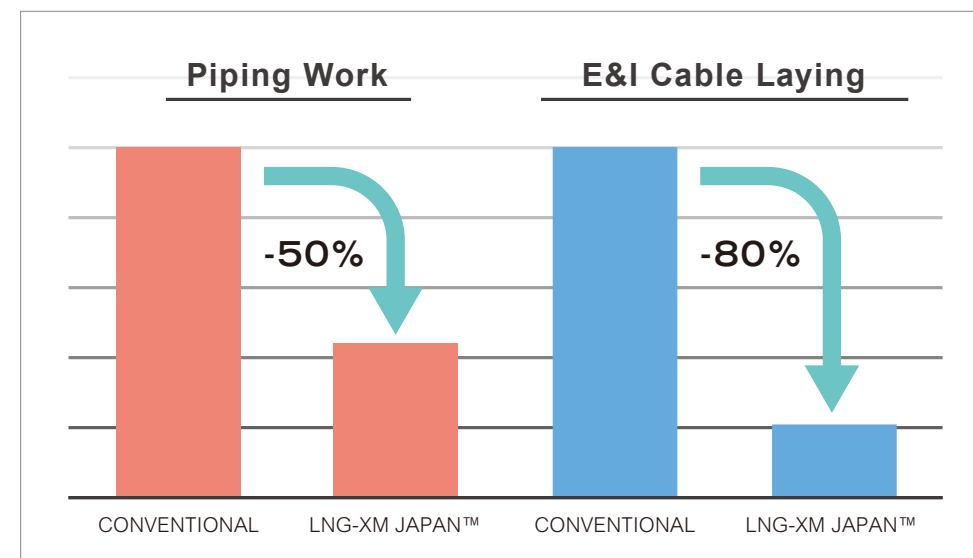


Chiyoda LNG-Xm Japan™ is named from its modules layout resembling the Japanese archipelago.

Minimum On-Site Work

CHIYODA LNG-Xm JAPAN™ combines optimized module design with a Standardized LNG Design Package to minimize site work volume.

Typical concepts include integrating Pipe Rack Modules (PAR's) with Pre-assembled Units (PAU's) and mounting Local Electrical Rooms (LER's) and Local Instrument Rooms (LIR's) on the PAU. Typical site work volume reductions for one process train are shown below:



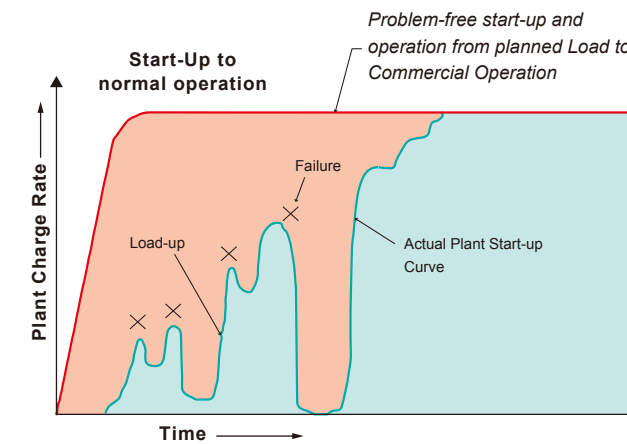
*1 PAR : Pipe Rack Module, PAU : Pre Assembled Unit,
*2 LER : Local Electrical Room, LIR : Local Instrument Room
*3 Comparison in in-house data for one process train.

OTHER SERVICES FOR THE PROJECT SUCCESS

Initial Plant Operation Services

Chiyoda supports Clients to initially operate completed plants, if required.

Chiyoda's superior project delivery proficiency maximizes Return on Investment by delivering safe and efficient start-up and LNG production through seamless transition from EPC to operation.



National Content Contribution Program

Chiyoda understands that maintaining a positive relationship with local communities is key for a successful project and has developed a "National Content Contribution Program" to assist Clients in attracting and retaining the local subcontractor, supplier and workforce in a mutually beneficial and sustainable relationship by promoting the project is an ideal first choice.

This is achieved by providing a framework for self-improvement through initiatives, such as mentoring and training programs, to foster a culture where local industry and workers can achieve their own objectives and attain higher performance benchmarks.



Training local workers



Lecture Programs for Local Elementary Schools



Chiyoda Corporation

Minato Mirai Grand Central Tower
4-6-2, Minatomirai, Nishi-ku, Yokohama
220-8765, Japan

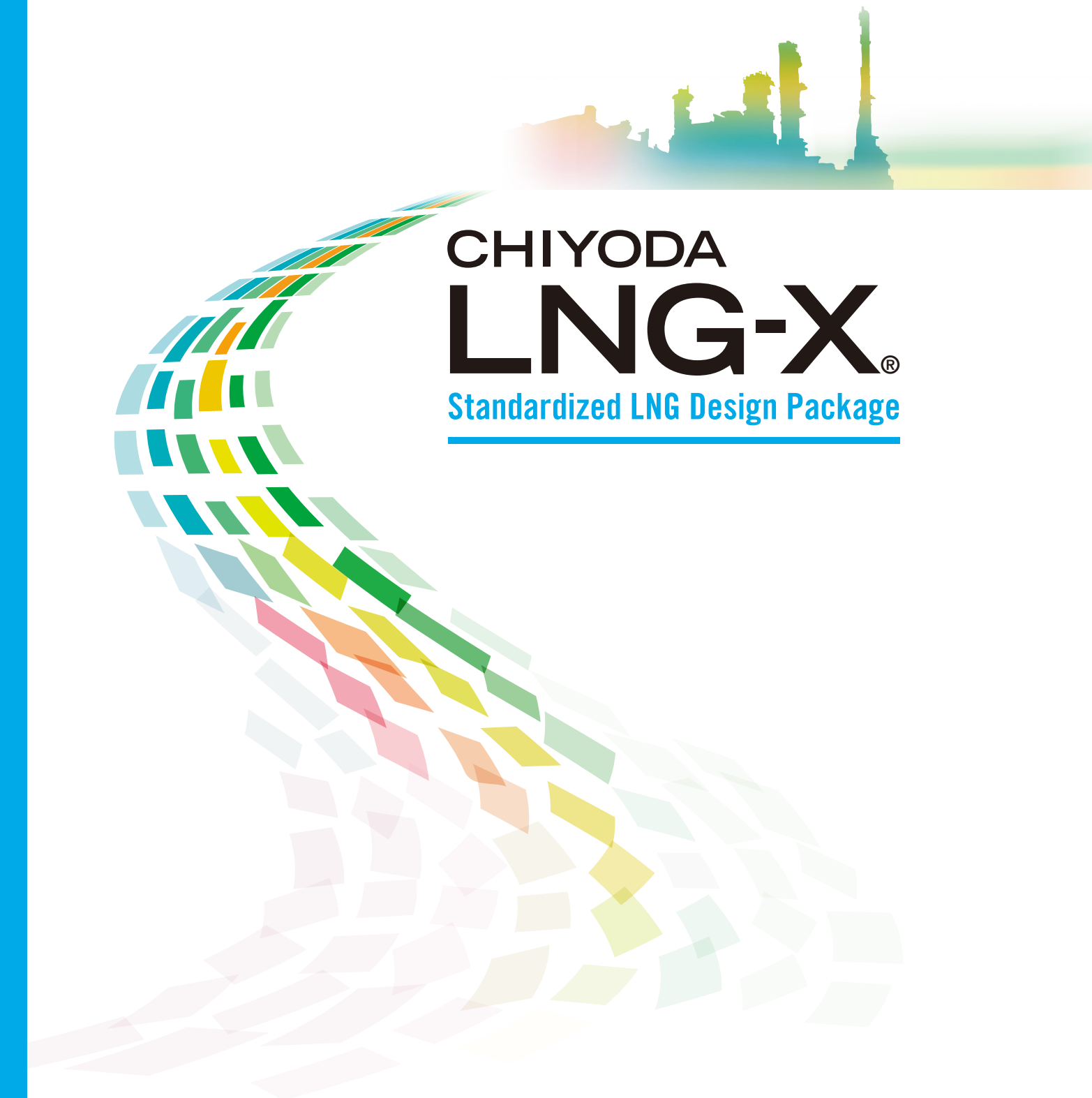
www.chiyodacorp.com



FTSE4Good

Selected in the FTSE4Good index series
(As of September, 2017)

17090200



CHIYODA
LNG-X®
Standardized LNG Design Package



WHAT IS CHIYODA LNG-X®?



Courtesy of ExxonMobil PNG Limited

Chiyoda's Challenge

Chiyoda Corporation, which has abundant experience and expertise accumulated through its EPC execution of more than 40% (capacity-wise) of worldwide LNG plants during last 10 years, has developed a "standardized design LNG package" named **CHIYODA LNG-X®**.

CHIYODA LNG-X® achieves **Fastest Project Delivery** and **Lowest CAPEX** with Safe and Reliable Operation.



What is CHIYODA LNG-X®?

- » **CHIYODA LNG-X®** provides a "Ready-designed Block Concept"
- » The plant comprises units such as an Inlet facility, feed gas treatment unit, NGL recovery / fractionation, liquefaction unit etc. Each unit includes options depending on feed gas composition.
- » Plot layouts and 3D models are standardized as a "Ready-designed Block Concept," and the most effective combination is selected to achieve client goals.

BASIC ADVANTAGES OF CHIYODA LNG-X®

Fastest Project Delivery

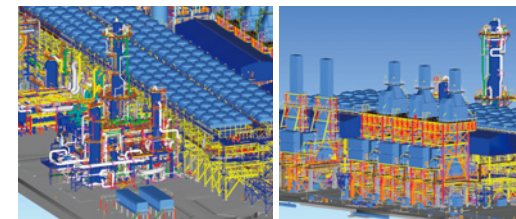
CHIYODA LNG-X® provides significant schedule improvement by minimizing early engineering work, including:

- » Conceptual and Basic Studies
- » Initial Process Engineering
- » General Specifications / Procedures Preparation
- » 3D Modeling Setup

Lowest CAPEX

Optimized design has been embedded into **CHIYODA LNG-X®** to realize the Lowest CAPEX considering the following:

- » HSSE Requirements
- » Value Improvement Items
- » Minimum Plant Layout
- » Minimum Major Piping Length / Cable Length
- » Minimum Construction Work Volume
- » Constructability, Operability & Maintainability
- » Chiyoda's Design Standard / Specifications



3D Model Images of CHIYODA LNG-X®

HOW IS CHIYODA LNG-X® DERIVING COMPETITIVENESS?

Specifications for CHIYODA LNG-X®

CHIYODA LNG-X® has been developed using Chiyoda LNG specifications based on "fit for purpose" and "necessary and sufficient for safe and reliable continuous operation" philosophies which challenge conventional and conservative engineering standards.

Unique Value Improvement Ideas for CHIYODA LNG-X®

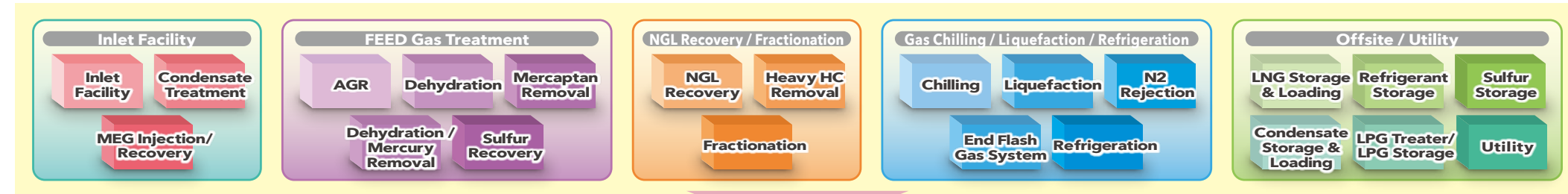
For economic and smooth LNG plant delivery, Chiyoda aims to optimize total plant design as a whole.

The engineers taking part in the downstream engineering such as Plot, Piping, Civil, Electrical and Instrument, which affect cost and schedule to relatively larger extent, put forward their ideas for cost/schedule improvements for the engineers of upstream engineering such as Process and Rotating Machinery.

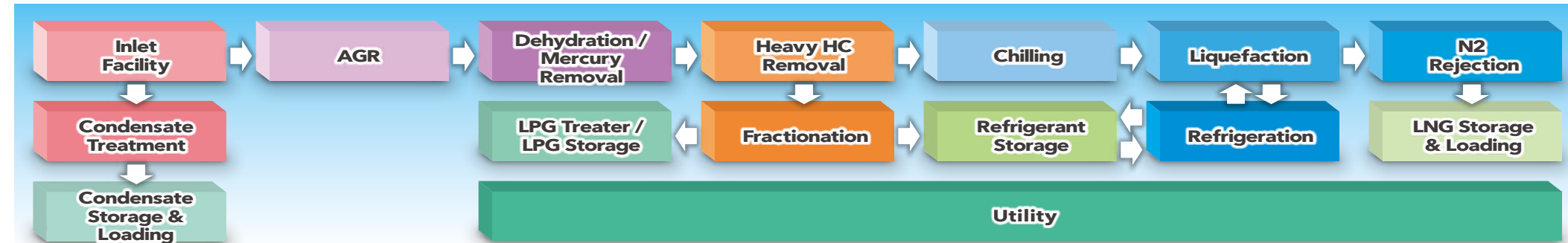
After evaluating such ideas by upstream engineers from "fit for purpose" viewpoint, the selected ideas are applied to "Ready-designed Block Concept."

Best Selection from "Ready-designed Block Concept" to satisfy Client's Requirement.

Ready-designed Block Shelf



Optimized LNG Train (Example)

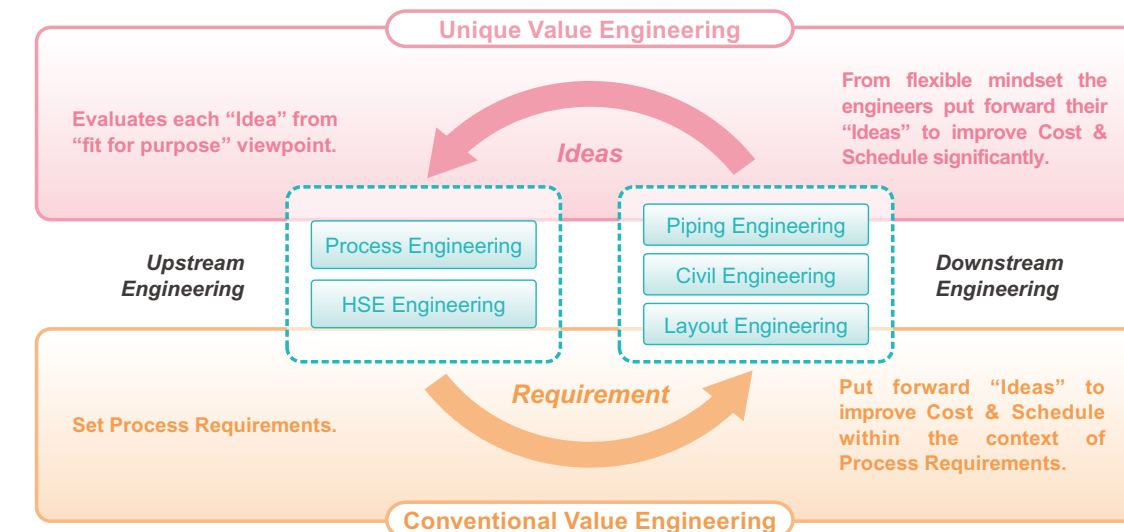


Value Improvement Items embedded in CHIYODA LNG-X®

- » Optimization of air fin cooler design, equipment and piping layout to reduce the overall plant footprint and piping length
- » Space for additional facilities to accommodate future changes of the composition of the feed gas
- » Selection of the lowest price and fastest delivery gas turbine in the market

Plant Scale of CHIYODA LNG-X®

- » Plant scale of design basis is 5MTPA.
- » **CHIYODA LNG-X®** accommodates flexible production scale, preserving the conceptual design philosophy such as equipment layout, piping & cable routing, operability & maintainability, etc.



CHIYODA LNG-X®
enhance the success of your LNG venture!