



CAPABILITIES OVERVIEW



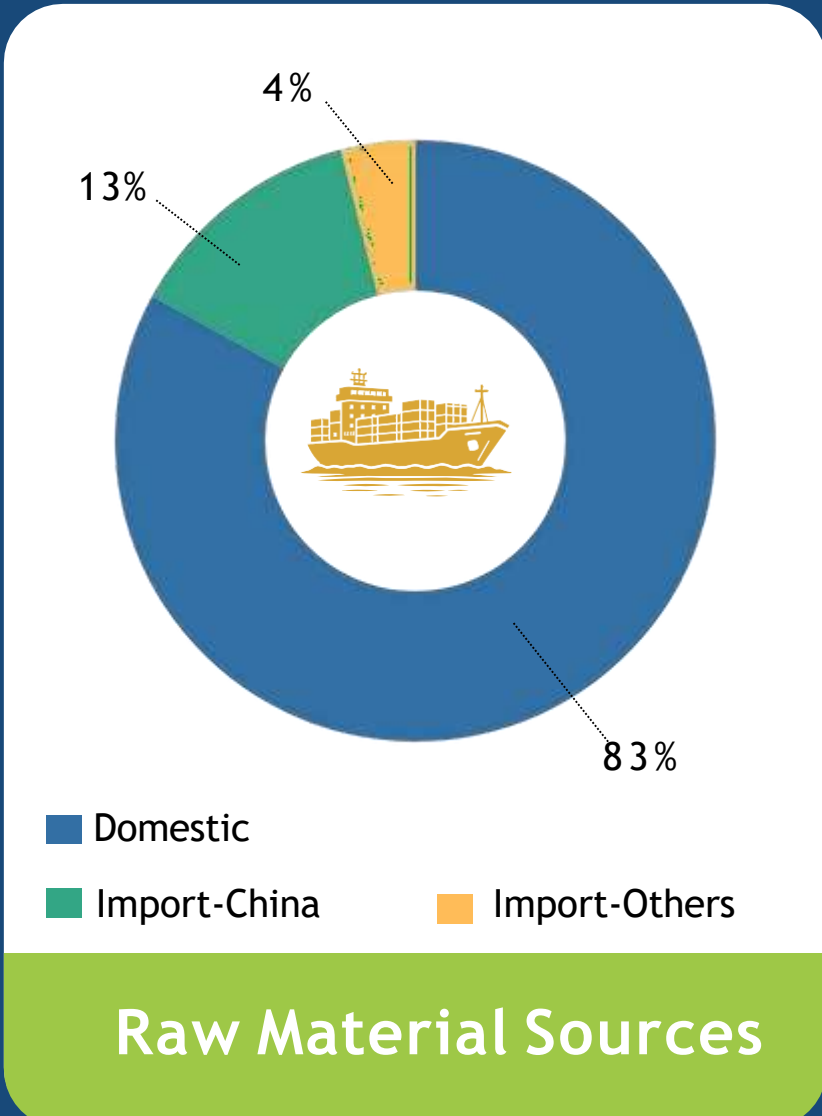
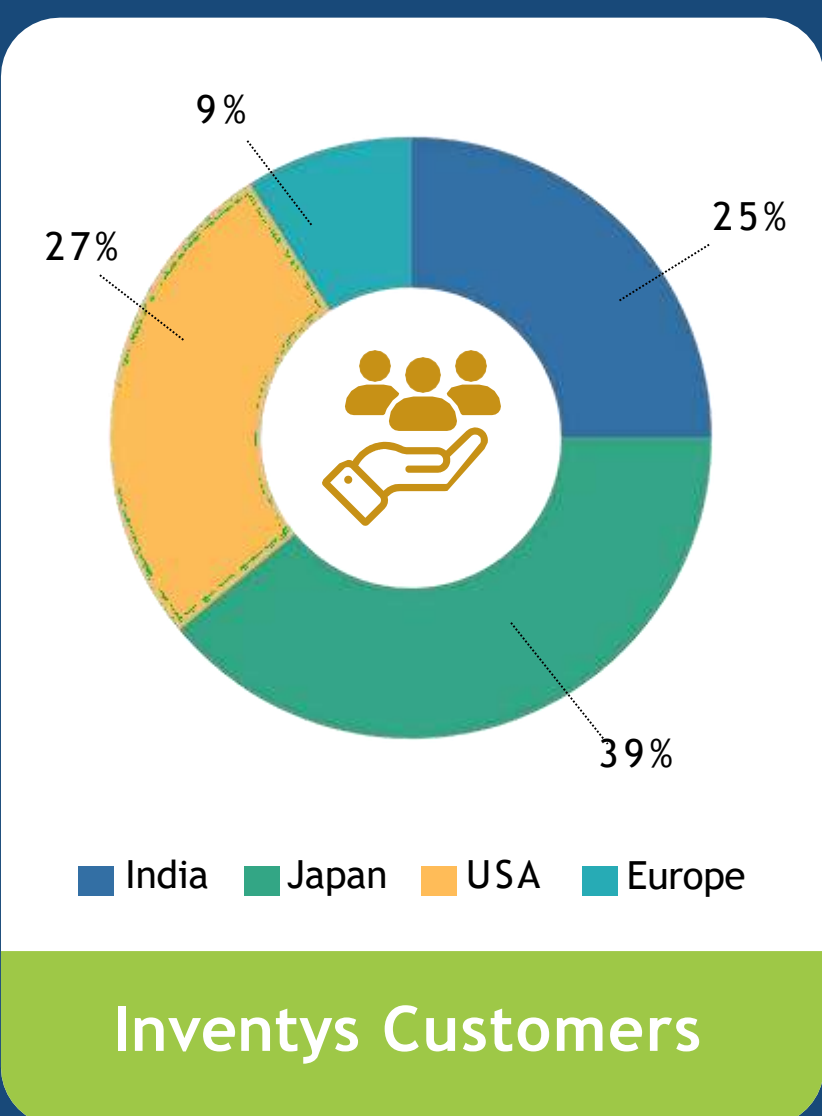
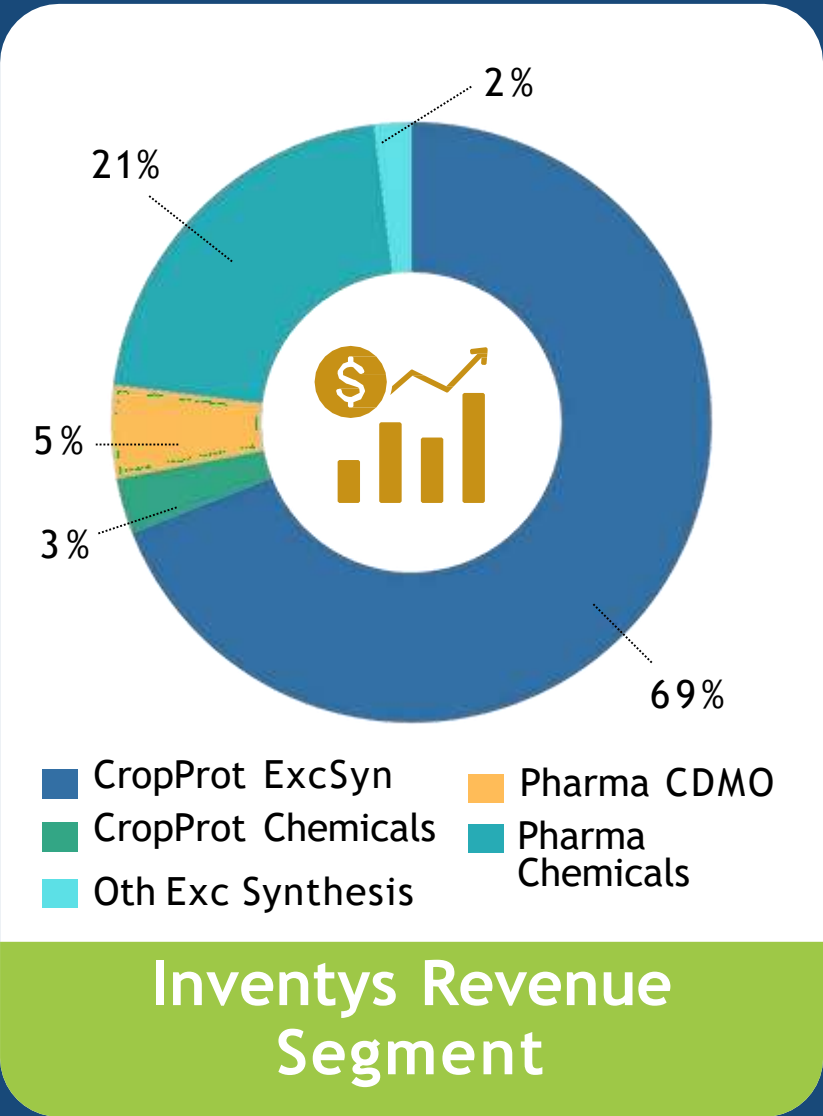
Corporate Overview **Our Values**



- Reliability & Trustworthiness
- Deep Domain Experties
- Responsive & Transparent
- Zero Critical Dependence On Unreliable Entities
- Responsible Behavior Towards Society, Employees, IPR, Environment & Suppliers.
- Sound Financials
- Safety
- Compliance
- Quality

Corporate Overview

Inventys – Key Statistics



Inventys revenue and customer segmentation is a testimony to its superior CMO services.

Inventys RM sourcing pattern is one of the factors contributing to high reliability

Capabilities - 3 Sites



CDMO Services

- Discovery (gm to Kg scale)
- Process Research and Development
- Rapid scale up (1kg to 100kg)
- Regulatory support



Production Facility Situated In Nagpur
- Logistics Capital of India

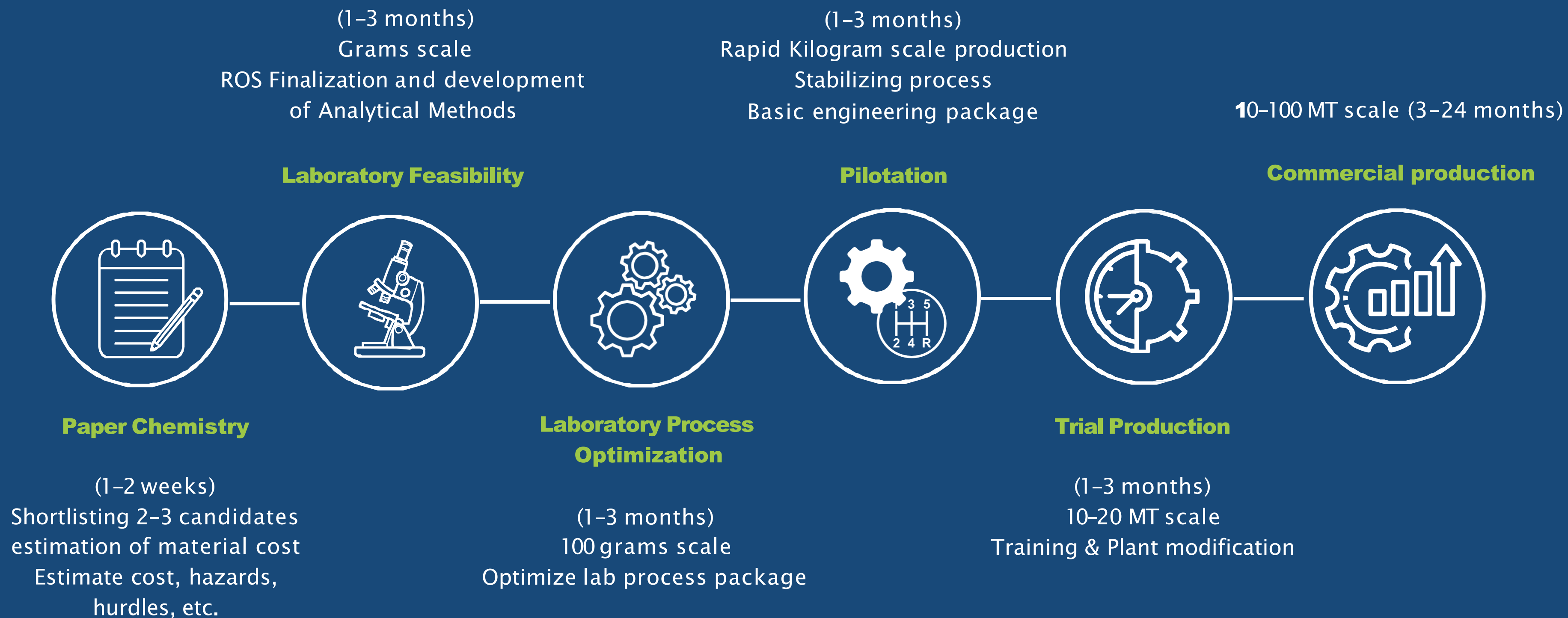


CMO Services

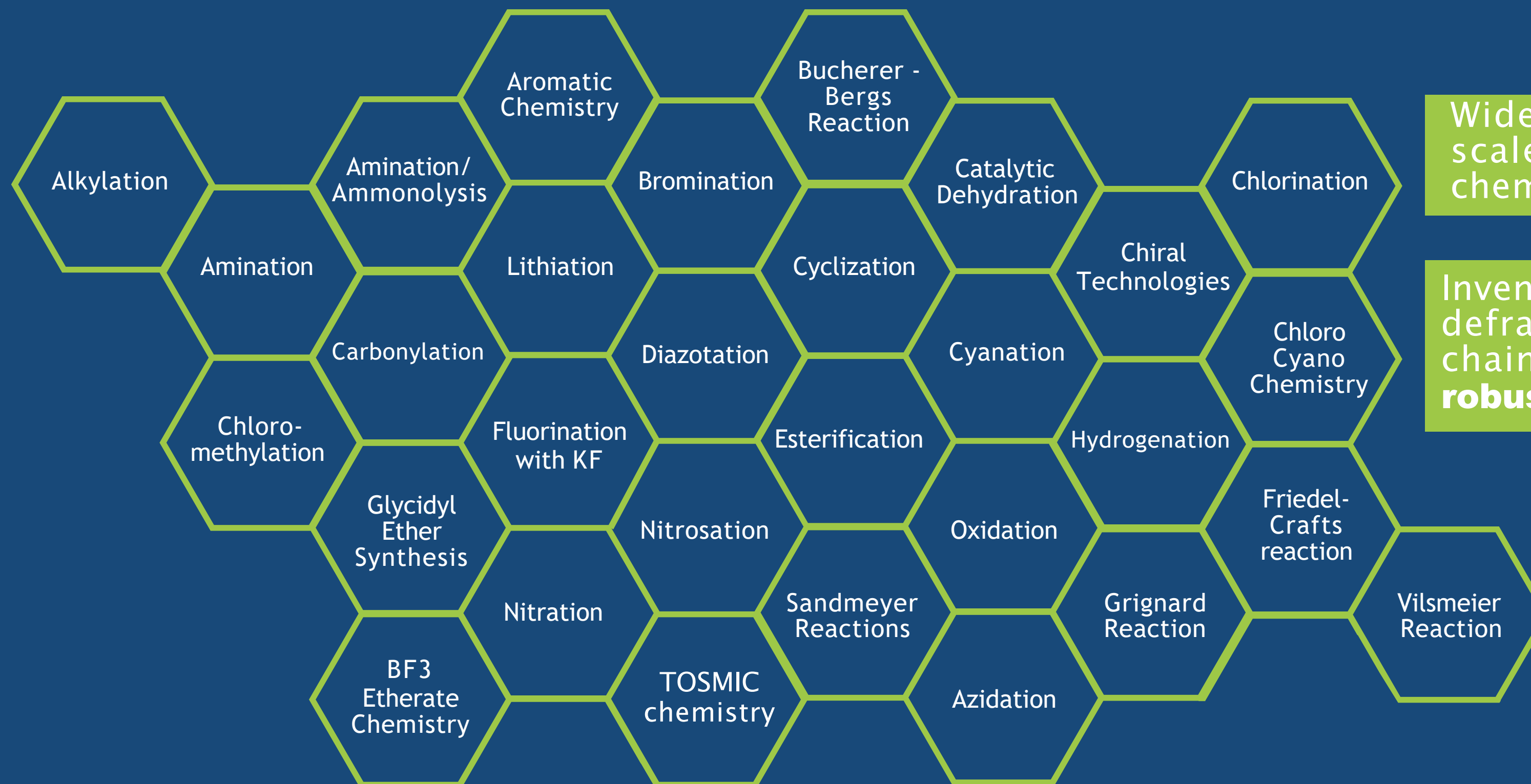
- Manufacturing Services
- Up to few 100MT/yr
- Pharma APIs
- Specialty Chemicals
- Electronic chemicals



Capabilities: Manufacturing Concept



Technology: **Wide Range of Chemistries**



Wide range of plant
scale implemented
chemistry

Inventys can help you
defragment your supply
chain & make it more
robust

Technology: Hazardous Chemicals

Dimethyl
Sulphate


Sodium
Fluoroborate

Sodium
Methoxide

Hydrogen

KF &
Fluorinating
agents

Bromine/
Chlorine



Precious
Metal
Catalysts

Liq. Ammoni
a & Aq.
Ammonia

Thionyl
Chloride /
Sulfuryl
Chloride

Carbon
Dioxide

Sodium
Cyanide



Sodium
Azide

HF-gas

CS₂

Triphosgen
e

Hydrazine
Hydrate
(80% &
64%)

Dry HCl
Gas

Technology: Flow Chemistry

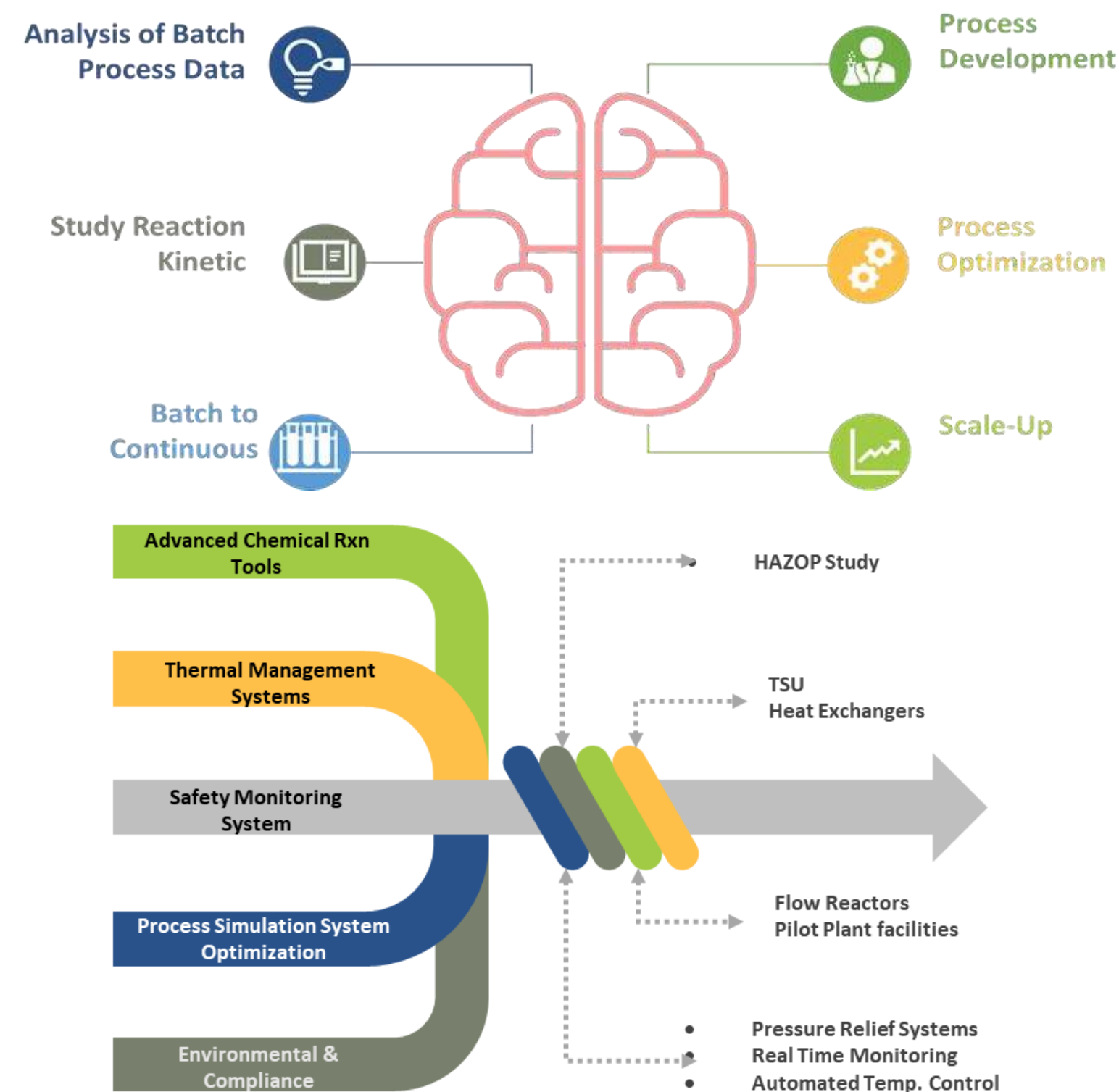


Inventys Approach

- Mastery over flow chemistry makes manufacturing safer, efficient, and creates less waste. Significantly lowering environmental impact.
- Focus on deep backward integration coupled with an excellent safety culture Inventys offers stable supply.
- Demonstrated commitment to sustainability (>51% energy from renewable source with NET ZERO carbon addition) – SINCE LAST 12 years!

Safer & Efficient Manufacturing by Inventys

- Inventys specializes in creating **safer & more efficient manufacturing plant design & process implementation** from lab processes– to significantly reduce **environmental impact**. Inventys has succeeded – in some cases – in reducing **energy** costs as well as **solvent** usage – by more than **90%!**
- Inventys offers unmatched expertise in **scale-up studies** and **process intensification**. For example, during the last 24 months Inventys teams scaled up 18 different products. Some with as many as **14 chemical transformations**.
- Using state-of-the-art DCS controlled manufacturing facilities, a highly qualified team, highly evolved **Process Hazard Analysis** methodologies along with strong Process Engineering skills, Inventys stands at the forefront of process innovation and **safe** chemical manufacturing.



Technology: Flow Chemistry

Hofmann Rearrangement



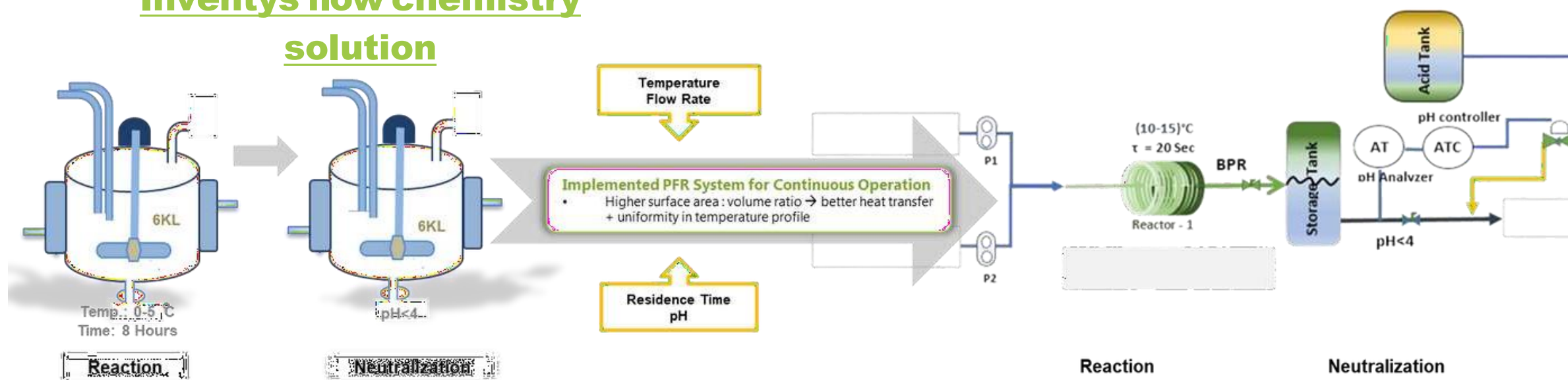
Challenge

S



Implemented PFR System for reaction followed by inline quench system for work-up.

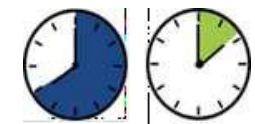
Inventys flow chemistry solution



Inventys advantages

Batch Reaction

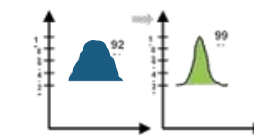
Flow Reaction



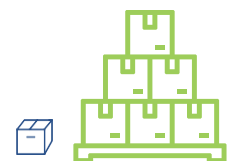
Reducing residence time 80%



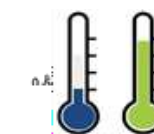
Reduced reactor volume requirement by factor of 170



With minimal capex; could meet demand



Throughput increased 15 times



Fine control of temperature profile makes process inherently safe



Due to higher surface area: volume ratio; significantly reduced energy consumption

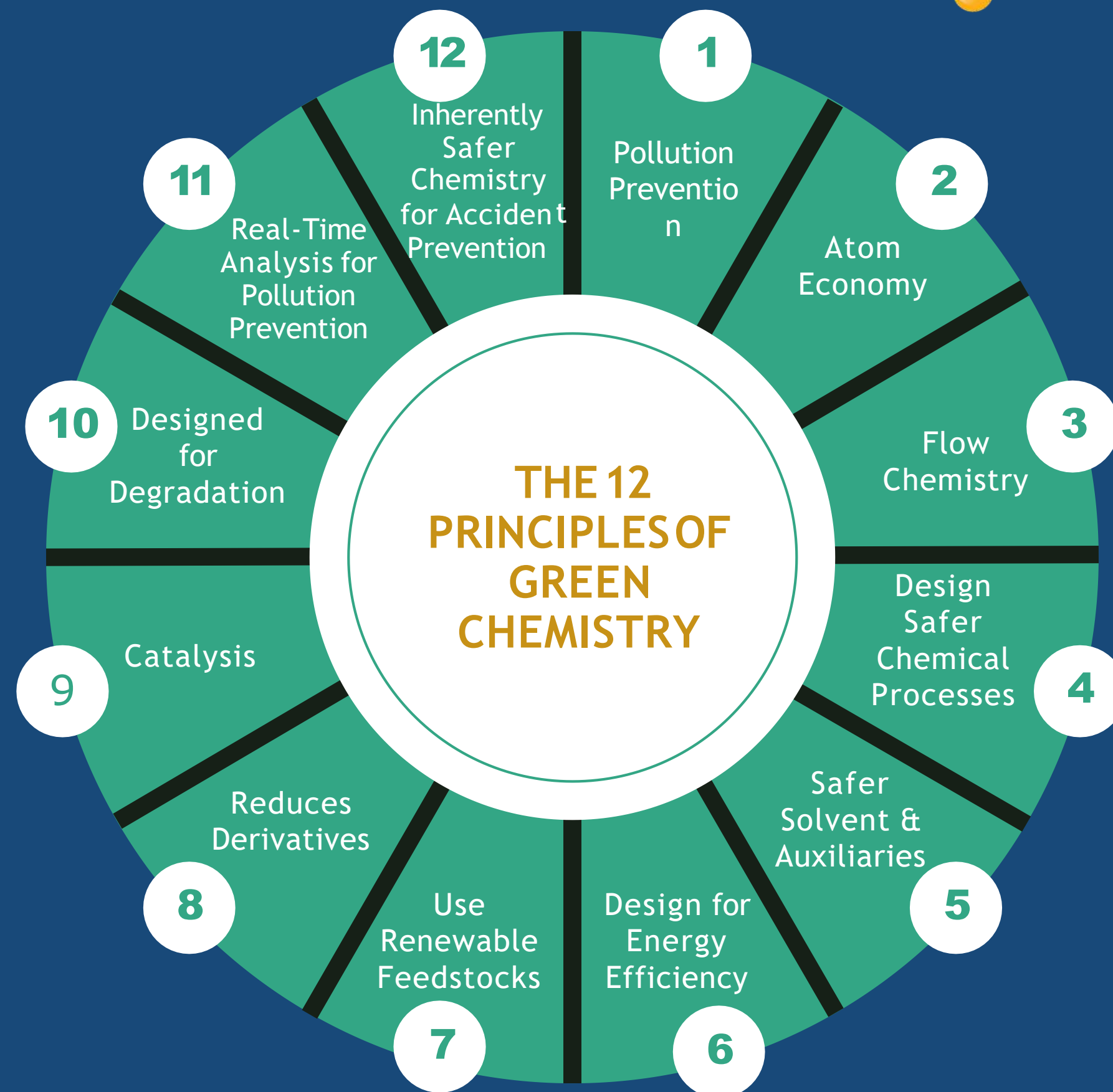
Technology: Green Chemistry



- One major product (3000 MTs/Yr)
Generates ZERO effluent
- Inventys received in 2022
BEST GREEN PROCESS AWARD
by FICCI

30%+ revenue derived from processes
SIGNIFICANTLY adhering to the principles of
Green Chemistry

>50% of energy is derived from renewable
resources, with NET ZERO carbon footprint



Integrated Manufacturing Site 1

Pharma and Specialty Chemicals



Concept

Manufacturing

- Continuous Improvement
- Synthesis Strategy to Development

- Quality Assurance & Quality Control
- Scale up to Commercial Process Production



- R&D (Batch/Flow) & ADL
- QC, QA & Microbiology
- Process, Safety & Hazards, Effluent Material



- Scale up studies (12 reactors)
- Pilot Scale Mfg (29 reactors)
- Total 41 reactors
- 30–300–1000 liter



- APIs & RSMs
- Specialties
- Advanced Intermediates (GMP & non-GMP)
- Bulk Intermediates



500 KL/Day
Discharge Permission

Integrated Site 1- 300 KL Reaction Capacity



Plant 1

Advance Intermediates
Plant Capacity: 121 KL
Reactor Range: 1.5–8 KL



Plant 2A/2B

Cyanation & Multi-Purpose Plants
Plant Capacity: 60 KL
Reactor Range: 1.5–17 KL



Plant 2C1 & 2C2

Advanced Intermediates
Plant Capacity: 93.5 KL
Reactor Range: 0.03–10 KL



Plant 2C3, 2C4 & 2C5

Advanced Intermediates
Plant Capacity: 70 KL
Reactor Range: 6 KL



Plant 3AB

API
Plant Capacity: 18 KL
Reactor Range: 4–6 KL



Plant H2

Hydrogenation Plant
Plant Capacity: 3 KL
Reactor Range: 3 KL

Production Capacities Site 2 (New)

(33% in 2024)

Advanced Intermediates

- 3 production blocks
- 36 reactors (Batch/Flow)–200+ KL and auxiliaries

Specialty Chemicals and KSMs

- 6 production blocks
- 150 reactors (Batch/Flow)–900+ KL and auxiliaries

Hydrogenation

- 1 production block
- 6 reactors (Batch/Flow)–50+ KL

Halogenation

- 1 Production block
- 10 reactors (Batch/Flow)–50+ KL

Fermentation Products

- 1 Production Block (Capacity to be decided)



Production Capacities Site 3 (New)

(40% in 2025)

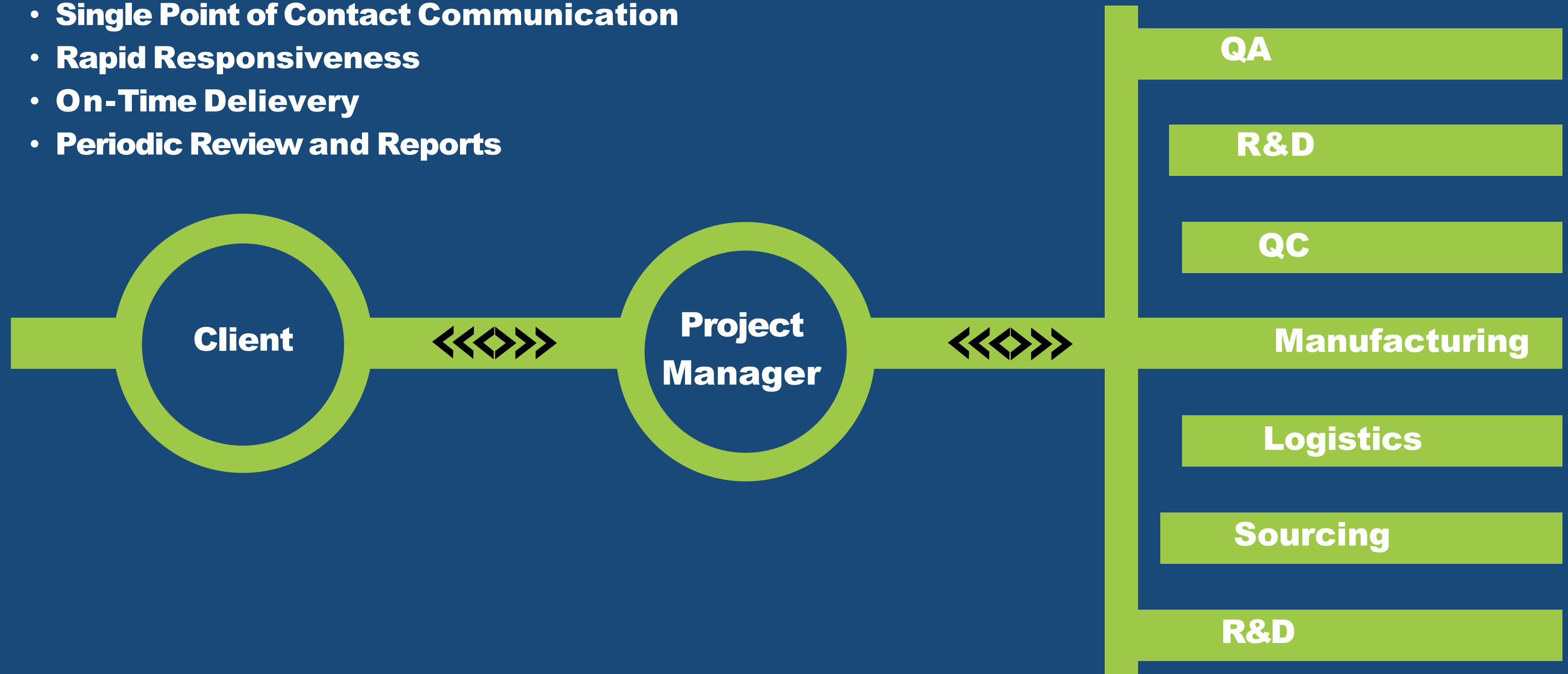
- Advanced Intermediates and Specialty Chemicals
- 5 Productions Blocks– 500+ KL
- 45 reactors (Batch and Flow)
- Other Supporting Equipment
- Quality Control
- Warehouse
- Packing
-



Project Management



- **Single Point of Contact Communication**
- **Rapid Responsiveness**
- **On-Time Delivery**
- **Periodic Review and Reports**



Project Management



Assigned Project Team and Project Manager per project

Dedicated Teams and Tailored Leadership :

- **Expert-Led Project Execution**

Each project is assigned a team of skilled and experienced project managers with a proven history of successful delivery.

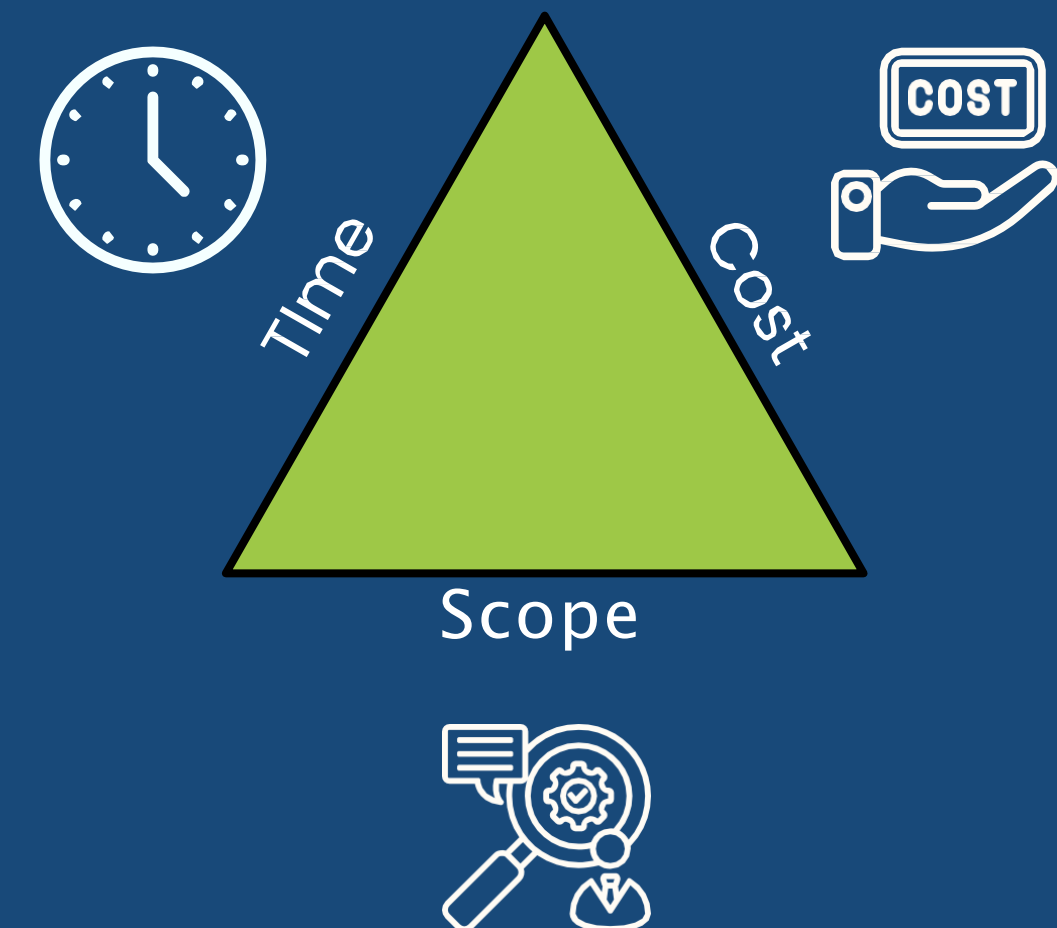
- **Commitment to Transparency and Communication**

We prioritize consistent, clear communication to ensure clients are informed about project progress, challenges, and resolutions.

- Weekly project meetings (Internal: Regis Team / External: Regis-Client).
- Direct, real-time access to scientific experts.

- **Collaborative and Client-Centric Management**

Our management philosophy emphasizes collaboration, incorporating client input into key decisions to maintain alignment with project goals.



Key Focus Areas

Quality

AUDIT

- Facility is audited and approved by statutory authorities
- Audited and approved by major Pharma and Specialty chemical innovator companies across the world

QUALITY BY DESIGN

- Robust process to ensure fail proof systems
- Focus on complete life cycle from R&D to production
- Testing and release of All batches , including intermediates as well as in process monitoring

CROSS CONTAMINATION

- Plant design to ensure NO cross contamination
- All material handling (solids and liquids) in dedicated and isolated areas



Safety: **Process Safety System**



Hazard Identification & Characterization

- **Literature**
- **TSU/ DSC analysis for ALL steps, ALL RMs/Intermediates, ALL Products, ALL Waste**
- **RC- when required**



Process Safety Analysis

- **Identify Onset Temperatures, Rate, Profile of Temperature and Pressure Increase**
- **HAZOP- Three times**



Hazards Addressal

- **Process Improvements / Modifications**
- **SOP and Education**
- **Continuous Training (out of 1,400 training sessions in 2023- 450 on safety)**

Process Synthesis and Development

- Preliminary HAZOP study#1 while selecting RoS, prior lab experiments start
- DSC/TGA analysis on each reaction mix, intermediates, and products
- Effects of process deviations are investigated for safety and quality

Sale up and Pilotation

- Exthothermicity/Mass transfer/heat transfer
- Material addition/processing times and other parameters
- HAZOP studies #2 –Before lab trials as well as scale up
- Critical HAZOP and safety mandated process interlocks are fully AUTOMATED

Commercial Productions

- Detailed HAZOP studies #3 –Using PID&SOPs of the commercial plants
- Top up HAZOP study#4–On final PID and SOPs before the commercial production
- All Critical HAZOP and safety mandated process interlocks are fully AUTOMATED

Periodical Health Check-ups

- Tie up with Local Hospitals
- Doctor to site premises

Safety: Sustainability



Mission

To be the most reliable & trustworthy partner to the Global Supply Chains in Lifesciences and Specialty Chemicals domains, providing Custom Development and Manufacturing Services.

Together for Sustainability

>51% of the total energy from renewable resources with NETZERO Carbon Since 2012



Safety & Sustainability

Safe Manufacturing

- Culture
- Systems Training
- Hardware
- Training

Decade + long demonstrated commitment excellence in Safe Manufacturing & Sustainable Practices



Environment



Onsite effluent treatment

- Each Production plant has dedicated preliminary ETP section
 - All aqueous waste is pre-treated in the production blocks
 - Input ETP is standardized and controlled
- Neutralisation and Aeration ponds (COD, BOD reduced <250)
- Multi Effect Evaporators (MEE) in place
- Site-1 discharge permissions : 300 KL/day
- Site 2&3 discharge permissions: 700 KL/day

Solvent Recovery

- Complete internal solvent recovery
- Each production block has dedicated recovery system

Site 1: 14 distillation columns (20m packed height)

Butibori MIDC-ETP infrastructure

Common ETP (CETP), Common Incinerator, Common Landfills



IP Protection



Protection of Key identifiers

- All proprietary information of clients is encoded

Secure IT infrastructure

- Only thin Clients are used, connected to central protected server
- Data transfer in/out is monitored and controlled
- Flash drives and external storage devices are disabled
- Access to commercial email websites are disabled

Additional IP protection

- Strong confidentiality agreements
- Cell phones, personal computers usage is restricted on site



Collaboration



MERCK

AstraZeneca

Pfizer

teva

BAYER

olon

CHORI

curia

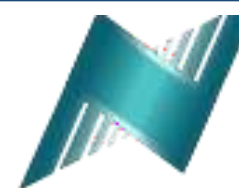
ISK ISHIHARA SANGYO KAISHA, LTD.



MITSUBISHI GAS CHEMICAL



MITSUI & CO.



Nissan Chemical

Nisso

FMC
An Agricultural Sciences Company

NIPPON KAYAKU

NIPPON STEEL

EUROCHEM
MINERAL AND CHEMICAL COMPANY

idemitsu

AlzChem

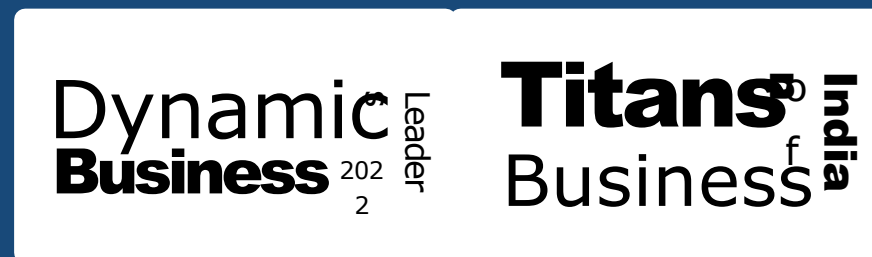
BASF
We create chemistry

HODOGAYA CHEMICAL

Honeywell

Gowan

Awards



High-Growth Companies Asia-Pacific 2023 – Top250

- Ranked 248th – by Financial Times (London)



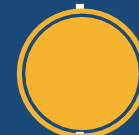
India's Growth Champions 2023 – Top100

- Ranked 58th – by Economic Times (Mumbai)



Best Green Process

- Federation of Indian Chamber of Commerce & Industries) 2022



Titans of Indian Business

- Fortune India Exchange Special Edition in February 2022



Business Across Borders

- dun & bradstreet (India) in annual publication 2021



Top 10 Dynamic Business leaders of 2022

- The Week magazine



Leaders of Tomorrow award

- ET NOW (Economic Times)" 2012

Why **Inventys**



Market Leader in CDMO and CMO services

- Healthcare/Specialty Chemicals/advanced intermediates/KSMs/NCEs

Backward Integration for sustainable supply chain

- Expertise in wide range of Chemistries and Handling hazardous chemicals on commercial scale
- World class engineering and state of the art facilities
- Large Ready capacity

Flexible and responsive to support clients at all stages

Professional management team with well funded 5 yr Business plan

Inventys Differentiators

- We will hit the ground running and deliver faster
- We will minimum customer oversight

Demonstrated track record of sustainable , safe and responsible practices