

Your CDMO Partner for Pharma, Nutra & Food Ingredients

Changing the Way we Make & Take Medicines

Agenda

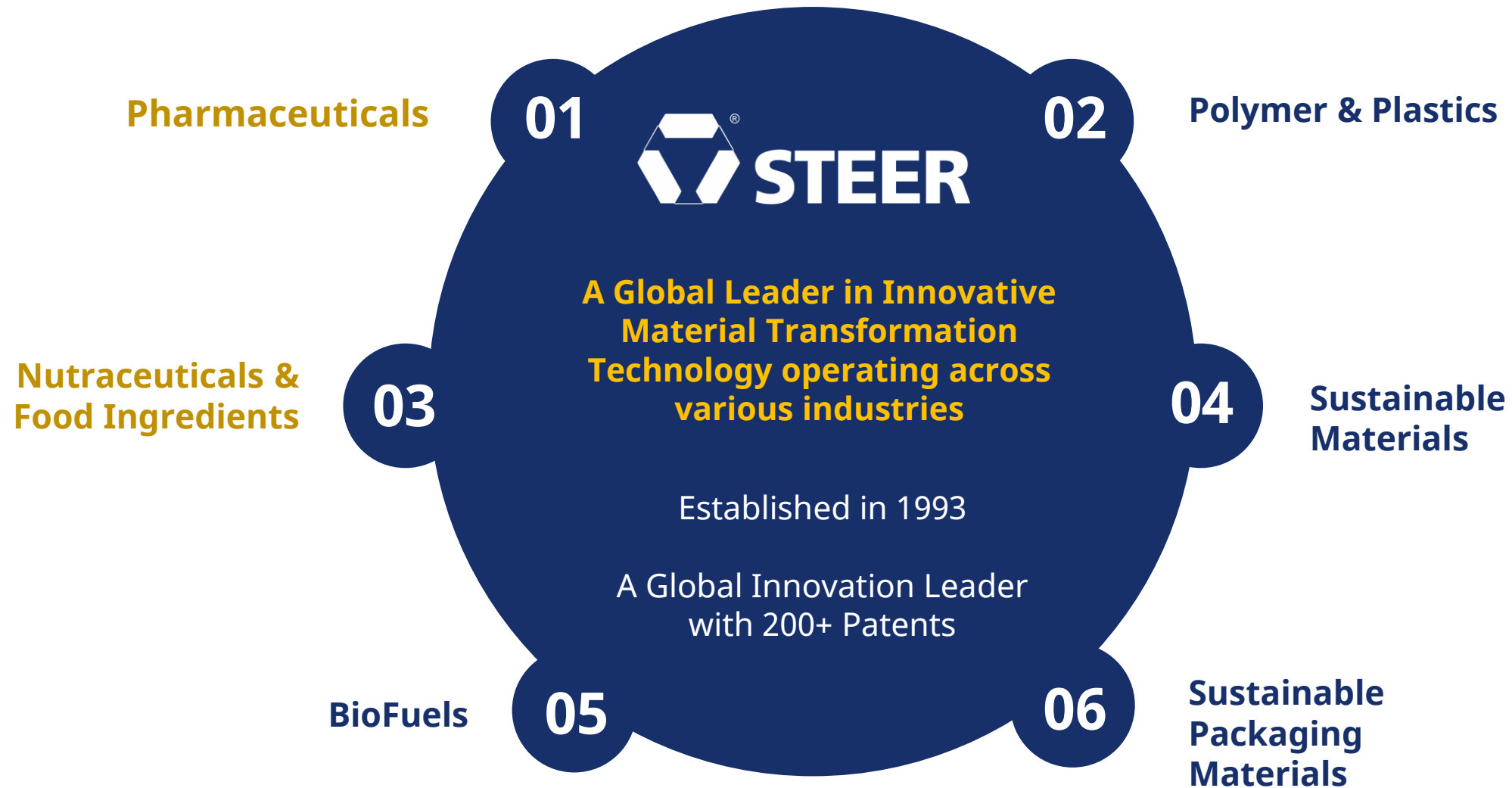
- 01 STEER World
- 02 Pharmaceuticals
- 03 Nutraceuticals
- 04 Food Ingredients



STEER World

Regenerating Planet. Transforming Lives.

We are Transforming **Process-based Industries** with robust technology & innovation



33 Years of Experience in diversified domains



A Global Leader in Material Transformation Technology



PHARMACEUTICAL



BIO-POLYMERS



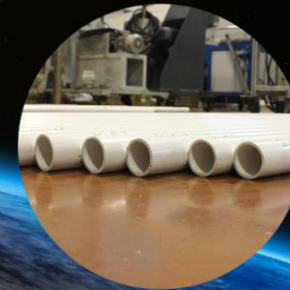
POWDERCOAT



POLYMERS

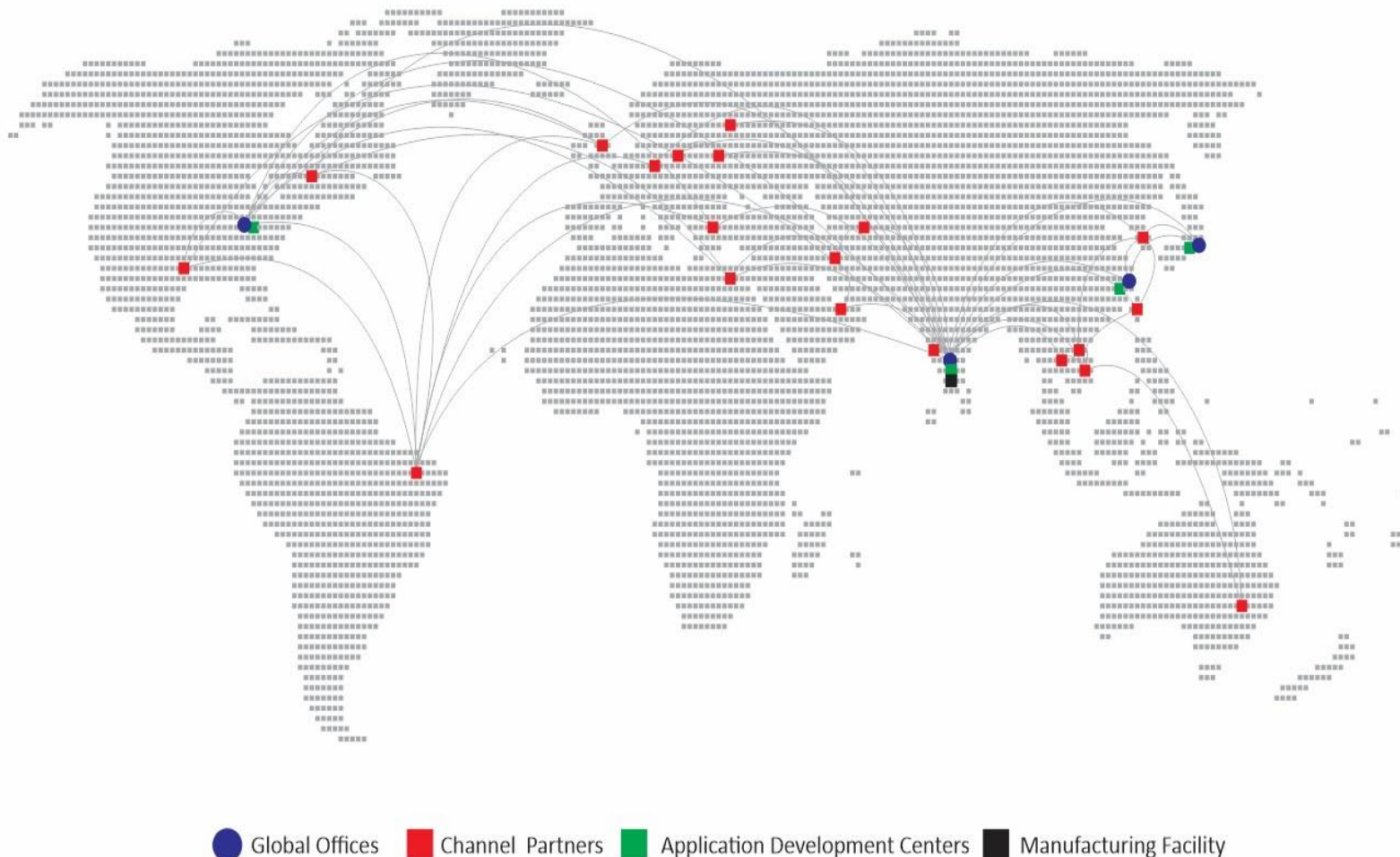


FOOD PROCESSING



CONSTRUCTION

50+ Countries Served. Customers across 5 Continents.



- ✓ 2 Manufacturing Locations (India)
- ✓ 4 Application Development Centers
- ✓ 5 Global Offices
- ✓ 500+ Employees
- ✓ 1200+ Installations
- ✓ Dedicated R&D Centers for Pharma, Food, Polymers & Plastics

Innovation isn't just a buzzword for us - its at the core of all we do



Our Strong Commitment to R&D is seen in our diverse patent portfolio

Filed	Active	Active & Granted
204	113	98

Our patents **range across all points of the value chain:**

1. Material of Construction
2. Geometry
3. Design of elements
4. Process
5. Products from the Processes
6. Product Attributes



Dr. Babu Padmanabhan

Founder, MD & Chief
Knowledge Officer, STEER
World



T N Hari

Executive Chairman,
STEER World



Dipak Chattaraj

Director, Pharma Division,
STEER World



Satish Padmanabhan

Joint MD,
STEER World



Dr. Himadri Sen

Chairman, Pharma
Division, STEER World



Indu Bhushan

CEO & Director, Pharma
Division, STEER World

Pharmaceuticals

Your Partner for Potent &
Difficult-to-Develop Generics

Pioneering the Shift in Pharma from Batch to Continuous

We are India's 1st organization pioneering the shift from batch processing to continuous processing

R&D



Commercialization

Our end-to-end expertise ensures progress all the way from R&D to Commercialization with no compromise on quality

We enable a **Reduction in Development Time & Faster GTM**

- Beyond just development (R&D) we possess the know-how on scalability and equipment as well
- A team that understands the landscape of compliance, regulatory requirements & has over a decade of expertise in drug development of challenging molecules
- A full-spectrum of end-to-end solutions from feasibility trials to a complete turnkey manufacturing solution



Meet Our Technical Team – Spearheaded by Indu Bhushan

A well-known & respected leader in the Indian Pharma Industry



Indu Bhushan | CEO & Director, Lifesciences division, **STEER World**

- M.Pharm with 30+ years of core pharma development experience
- 80+ publications & patents
- Awarded the “Chairman’s Excellence Award” in Dr. Reddy’s Laboratories
- Ex-Senior VP (Global R&D) at Mylan
- He has been associated with a multitude of MNCs, where he played a key role in setting up the facilities and resources for the development of generic and specialty pharmaceuticals.

With 100+ combined years of industry experience



Dr. Vinay Rao, AVP – R&D

- M.Pharm & a PhD with a massive 28 years of experience in R&D & Technology Transfer.
- He has 41 research publications in various journals & 36 patents.
- Successfully developed 4 novel platforms using co-rotating twin screw processor in Pharma, Nutra & Food products
- Commercialised a number of products based on STEER's platforms.



Saravanan Chandran, GM- AR&D , Quality

- M.Sc. & M.Phil. With 22 years of experience in API and formulation AR&D and Quality.
- Ex-Orchid (R&D), Ex-Biocon (R&D), Ex-Medreich (R&D) (Group company: Meiji)
- Has contributed to over 85 dossiers development for various regulatory agencies.
- Has been integral to the development of 20 DMFs for various regulatory agencies such as Health Canada, MHRA, USFDA, PMDA & ANVISA.



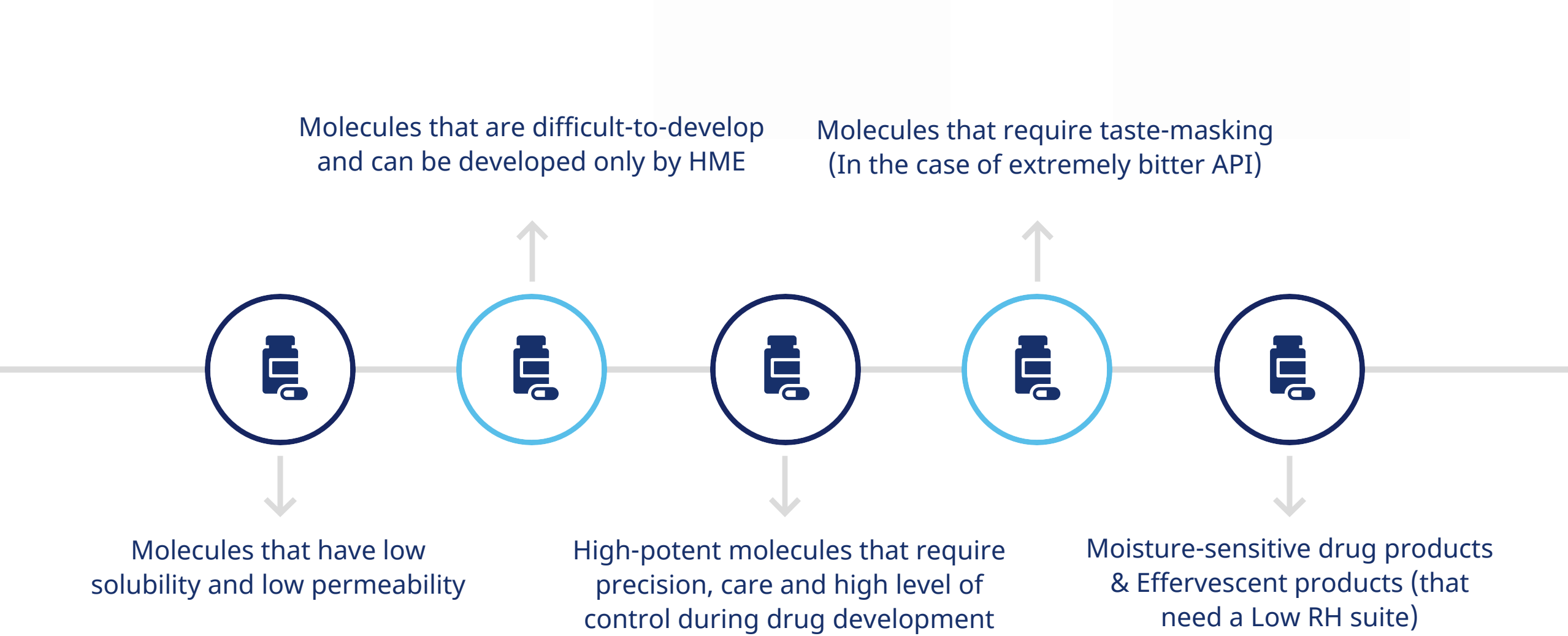
Vasu Chakaravorthy, AGM – Tech Transfer & Ops

- M.Pharm with 20 years experience in Formulation, process development & TT.
- 100+ ANDAs & Dossiers including USA, EU, Canada & Aus in oral solid dosage forms
- Post-approval: 200+ products launched
- Hands on expertise in IR, ER, DR, Bilayer, osmotic delivery, oral dry powders and sachets
- Developed products for US market: F2F category

AIDING YOU FROM HERE



With our unique technology & expertise, we can trouble-shoot for you in these problem areas



We aid in Brand Lifecycle Management

Post-Patent Expiry

Eg – Reduction in tablet weight

We Drive Brand Differentiation

Late-Stage

Eg – Solvent free process

We Enhance Brand Value

Early-Stage

Eg – Improved dosage form



Critical Therapeutic Categories We Specialize in



**Oncology
Drugs**



**Anti-Retroviral
Therapy**



**Anti-tubercular
agents**



Anti-Malarials



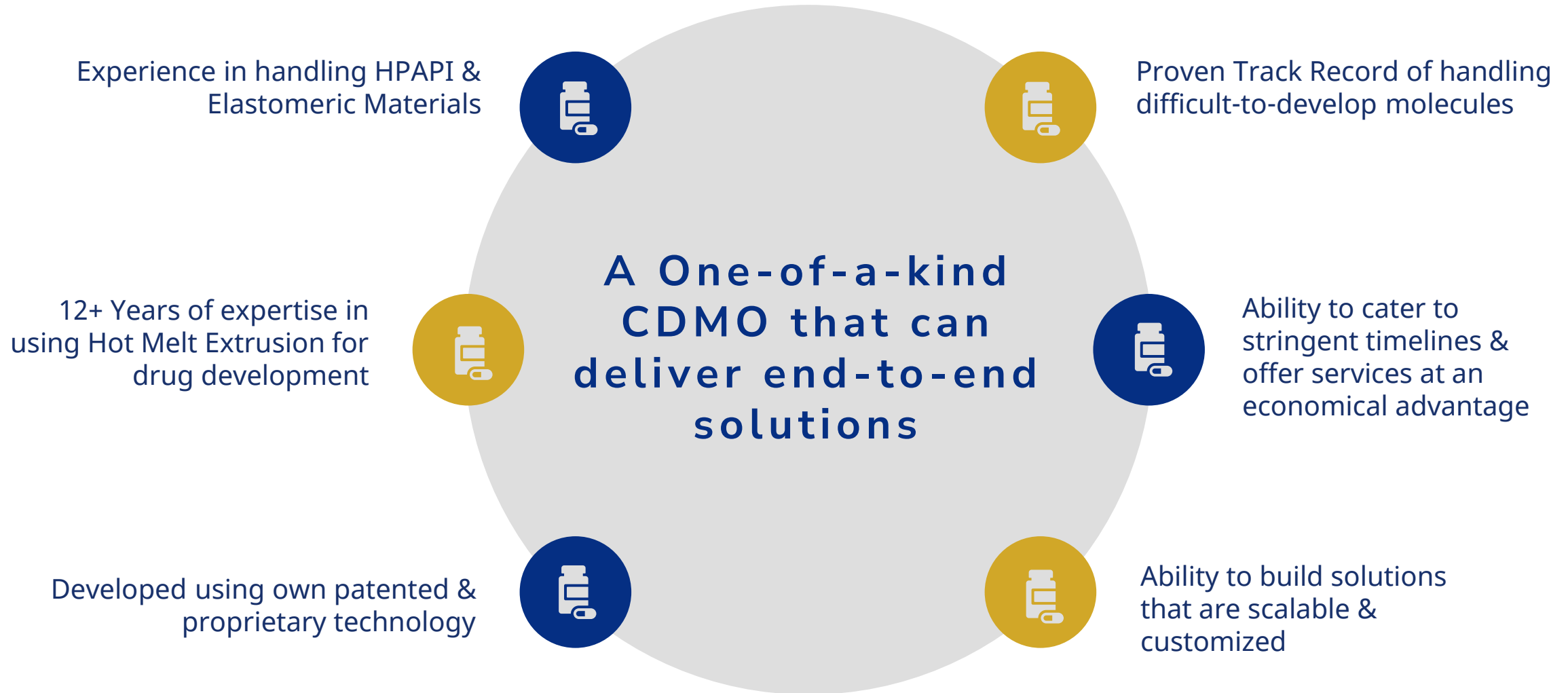
**Anticonvulsants
& Anti-Fungals**



Molecule	Development Pathway	Market	RLD	Pilot BE Expected in
Apalutamide	PIV	LATAM	US	Mar-26
Apalutamide	PIII	Europe	Europe	May-26
Enzalutamide	PIII	Europe	Europe	May-26
Enzalutamide	505B(2)	US		Dec-26
Venetoclax	PIII	Europe	Europe	Feb-26
Venetoclax	PIV	LATAM	US	Jun-26
Olaparib	PIII	Europe	Europe	Mar-26
Etonogestrel	PIII	India	India	Jun-26
Isotretinoin	PIII	US	US	Oct-26

Products Under Discussion for Development

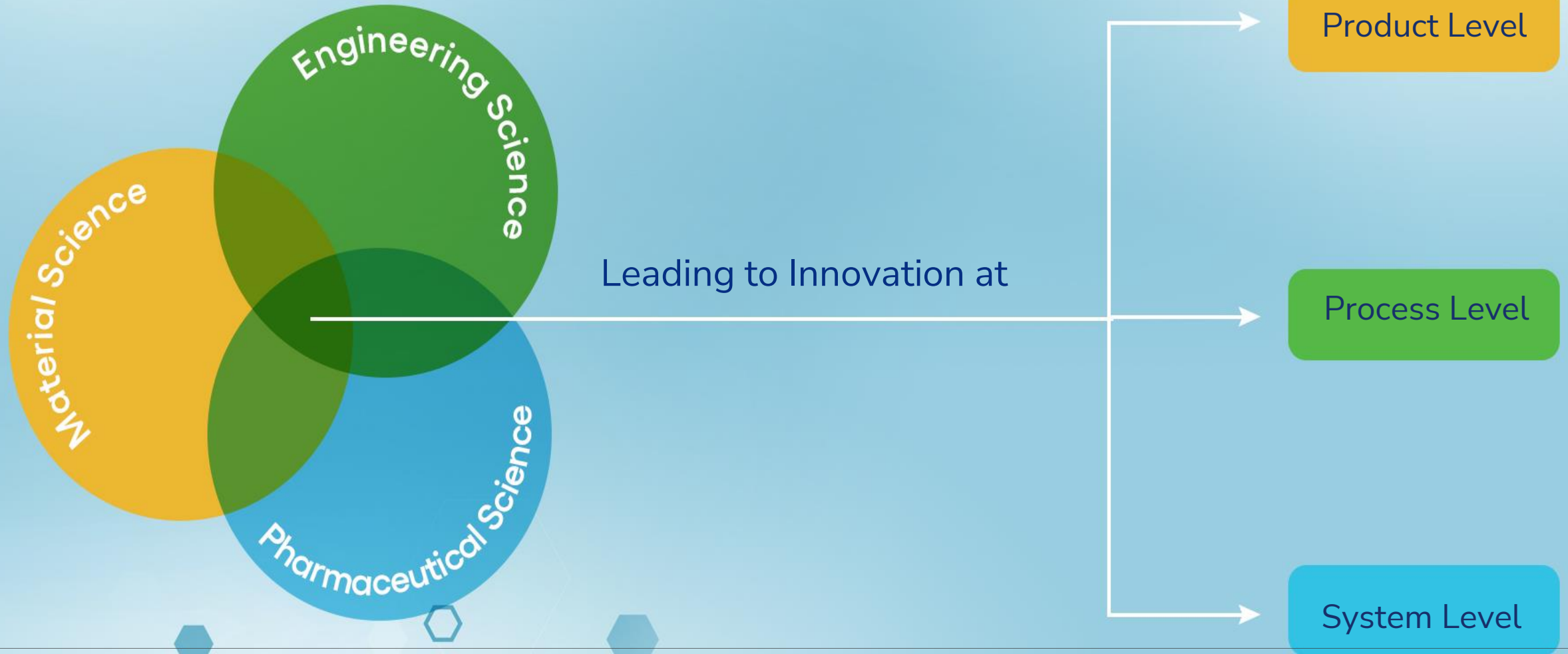
Therapy Area	Name of the Molecule	Brand Name
Anti-Tuberculosis	Bedaquiline	Sirturo
Lung cancer	Alectinib	Alecensa
Prostrate cancer	Darolutamide	Nubega
Prostate cancer	Enzalutamide	Xtandi
Ovarian Cancer	Niraparib	Zejula
Lymphoma	Acalabrutinib	Calquence
Lymphoma	Zanubrutinib	Brukinsa
Skin cancer	Encorafenib	Braftovi
Multiple sclerosis	Siponimod	Mayzent
Multiple sclerosis	Ozanimod	Zeposia
Multiple sclerosis	Diroximel fumarate	Vumerity
Cystic Fibrosis	Elexacaftor/tezacaftor/ivacaftor	Trikafta / Kaftrio
Cystic fibrosis	Ivacaftor + Lumacaftor	Orkambi
Renal function	Finerenone	Kerendia
Anti-retroviral	Etravirine	Intelence
Antiretroviral	Abacavir/Lamivudine/Dolutegravir	Triumeq
Antiretroviral	Tenofovir/Lamivudine/Dolutegravir	
Antiretroviral	Tenofovir Alafenamide-Emtricitabine/Dolutegravir	Spegra
Antiretroviral	Dolutegravir sodium	Tivicay
Ulcerative colitis	Mesalamine	Lialda
Ulcerative colitis	Mesalamine	Pentasa
Fungal infection	Posaconazole	Noxafil
Severe acne	Isotretinoin	Accutane
Rheumatoid arthritis	Baricitinib	Olumiant
Rheumatoid arthritis	Upadacatinib	Rinvoq
Rheumatoid arthritis	Filgotinib	Jyseleca
Pain relief	Ibuprofen Arginine	Unique technology targeting huge reduction in cost, having huge benefit over plain ibuprofen.
NSAID	Mefenamic Acid	Ponstel
Erectile dysfunction	Tadalafil	Cialis



What Sets Us Apart from other Pharma Companies ?

Unique Synergy of Three Sciences

Combined with **Continuous Flow Manufacturing Technology**



Case Study: Complete Development of a generic equivalent of Etravirine

For a Top Pharmaceutical MNC in USA – Filed for ANDA Approval

The Problem

- Drug was poorly soluble & bioavailable
- Drug decomposes easily on melting
- HPMC was the only polymer option available – but it is a heat & shear sensitive polymer

Benefits of the Solution

- Our solution significantly improved downstream size reduction efficiency
- Reduced Manufacturing costs
- Melting of the drug & polymer with No degradation
- Gave the potential to create multiple FDCs

The Solution

- With our patented & proprietary Hot Melt Fusion Technology, we developed a new process for developing & manufacturing the drug – **without any change in Q1 & Q2**

Outcome for the Customer

- Enabled our Customer to set new standards in **OSP & Pharmaceutical Drug Product Development** by supporting them in **filing for ANDA approval** of this drug with **USFDA** (as this drug product was **developed & manufactured purely using Continuous process technology**)

We have executed controlled release drug delivery systems for different customers

Metformin HCL extended-release tablets (For a customer in India)

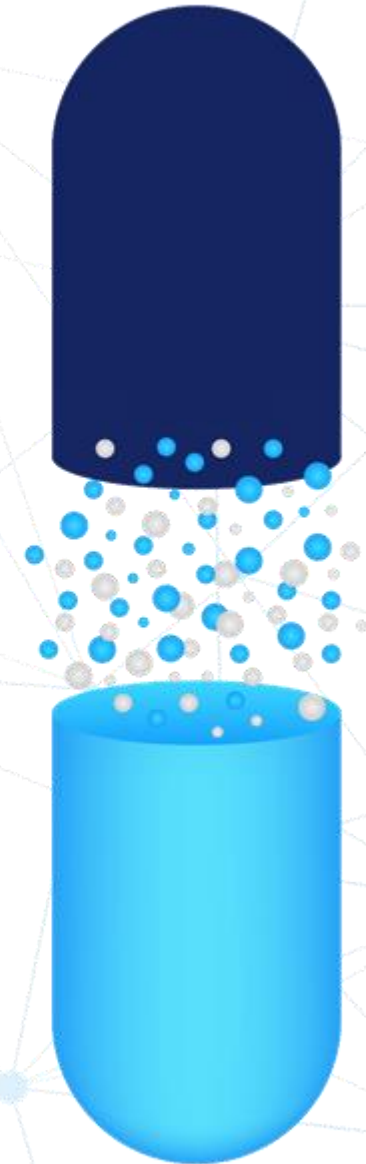
- We Developed a solvent-free granulation process with our continuous granulation technology (INTEGRAAL™)
- Resulting in Tablets that complied to the dissolution profile testing as per USP



For an Indian Customer (Pharma)

RTC Naproxen Granules

- Developed an entire continuous granulation line for commercial manufacturing of Naproxen granules
- Established the granulation process first on an R&D scale granulator
- Based on results of a 900Kg run, commercial system was designed, built, installed & then qualified at customer's site
- We achieved 3 validation batches of 20 hours each - run continuously in production mode



For a Pharma MNC in India - Development of a Contraceptive Implant equivalent to NuvaRing[®]

ETONOGESTREL & ETHINYLESTRADIOL VAGINAL RING



Strength :

- Etonogestrel - 0.120 mg/day
- Ethinylestradiol - 0.015 mg/day

**Proof of Concept for the Drug loaded core strand
was successfully developed**

Nutraceuticals

Your Partner for Development & Manufacturing
of High-Performance Nutraceuticals

We Empower Nutraceutical & Wellness Brands

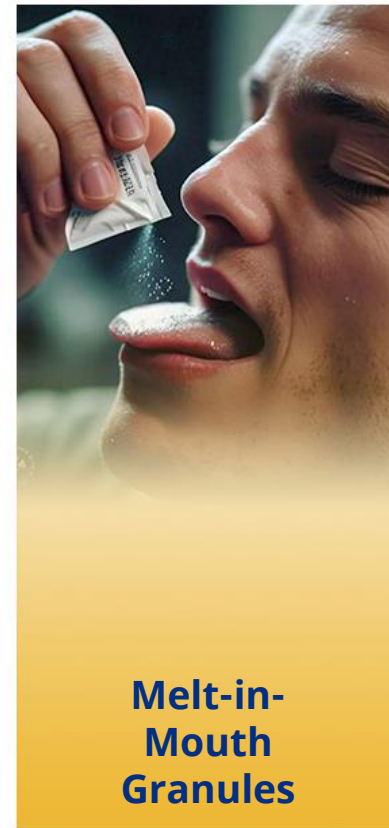
By developing differentiated products that help them stand out in a noisy market

Your Partner for **Private labelling** & Contract
Manufacturing of **Differentiated Health Supplements**

- Effervescent Products
- Melt-in-Mouth Products



Product Formats We Can Cater to



Liposomal Iron Melt-in-Mouth Tablets

An innovation in the iron supplement category after decades (Prophylactic)

- Highly Bioavailable form of Iron (**300% more bioavailable** than Traditional source Iron)
- With **negligible side effects** compared to other forms of iron



Don't Grab your Coffee, Just Pop It!

- Provides just the right amount of caffeine
- Gives optimal & smooth onset of focus
- All the benefits of caffeine without any sugar

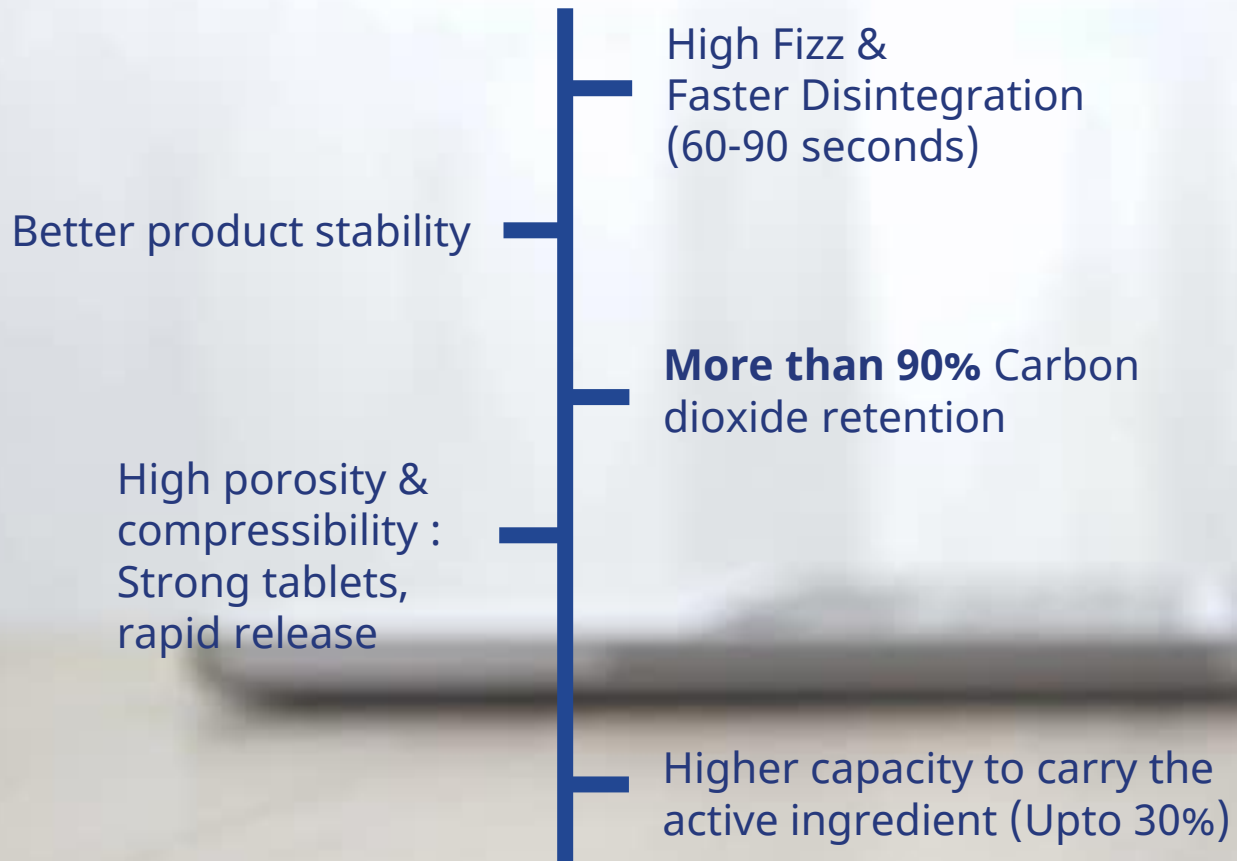


EXIMIOUS[®] Granules : At the heart of our effervescent health supplements



- EXIMIOUS[®] is a single-step continuous process, producing highly porous and compressible stable effervescent granules, ready for blending and tableting.
- EXIMIOUS[®] Granules are the effervescent couple (granules) produced as a result of this smart effervescent continuous processing platform.
- It is a patented & proprietary technology developed by STEER

Granule Excellence & Superior Stability



Enabling You to Replace Sodium with Potassium in your effervescent formulations



Why Replace Sodium?

- Traditional effervescence relies on sodium bicarbonate
- But in geriatric patients, excess sodium raises blood pressure
- Potassium bicarbonate offers a heart-healthier alternative

Our Solution: Potassium-Based Effervescent Formulations

- We develop effervescent products replacing Sodium with Potassium Bicarbonate, thereby lowering sodium levels
- Enhances compliance among elderly consumers & Maintains effervescent performance without health compromises

How We Achieve This

- At the Ingredient Level – Stabilization of potassium bicarbonate
- At the Granule Level – In-situ passivation during granulation

N-Acetyl Cysteine (NAC) Effervescent Tablets

Each 3200 mg tablet
contains **600 mg of NAC**

Drop 1 Tablet in a 250 mL of water.
Drink after it fully dissolves.

DROP. FIZZ. SIP.

Orange Flavour



Vitamin C Effervescent Tablets

Available in 5 tablets per tube, 10 tablets per tube, 15 tablets per tube & 20 tablets per tube

Available in various multiple customizable flavours

DROP. FIZZ. SIP.



● Boost your immunity on-the-go with our Vitamin C Effervescent Tablets

● Formulation with Natural Source Vitamin C also available

● Each tablet contains 1000mg of Vitamin C

**Designed to Fill the Gaps
in Your Daily Nutrition**

Available in 5, 10, 15 & 20
tablets per tube

Available in various multiple
customizable flavours



DROP. FIZZ. SIP.

Effervescent Powder in a Sachet

Flavored Fizzy
Antacid powder

Rapid acidity
reliever

5g per Sachet

Available
in customizable
flavours

Low-Sodium
version
available for
geriatrics

ANTACID POWDER

Relief from Symptoms of Acidity & Heartburn



Other Products we have developed (Non-exhaustive list given below)

1

Calcium 1000mg
Effervescent Tablets

2

Calcium + Vitamin D3
Effervescent Tablets

3

HMB + Vitamin D3
Effervescent Tablets

4

Antacid
Effervescent
Tablets

5

- Aspirin Effervescent Tablets
- Paracetamol Effervescent Tablets

6

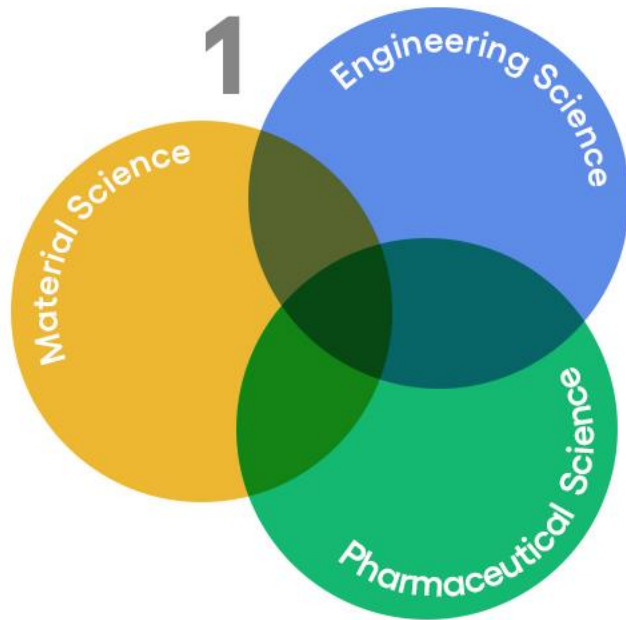
Vitamin C + Zinc
Effervescent Tablets

We also undertake custom product development for your new product concepts

- Effervescent Tablets
- Effervescent Powder (Sachet)
- Effervescent Powder (Stick Pack)
- Melt-in-Mouth Products



Why Choose STEERLife ?



Unique synergy of all **3 sciences** combined with continuous manufacturing technology

2

Quality by ~~Testing~~ → Design

3

Our unique technology enables developing Nutra products with significantly minimal excipients (aids)

4

Solvent-free technology that can handle formulating & processing complex ingredients

5

A team with wealth of formulation expertise

6

Enabling the development of effervescent nutraceuticals with low Sodium for the geriatric population

Significant improvement in process control

Reduced Risks

Improved stability of process and product

Food Ingredients

Enabling Better Functionalization
of Your Biomolecules

With our proprietary & patented Hot Melt Extrusion & Granulation technologies

As your partner for advanced ingredient solutions
We can functionalize (**encapsulation** & **granulation**) a range of biomolecules

such as

1

Flavours

2

Spice Extracts

3

Oleoresins

and much more...

End-User Industries Served



Tea



Confectionary



Spices



Beverages

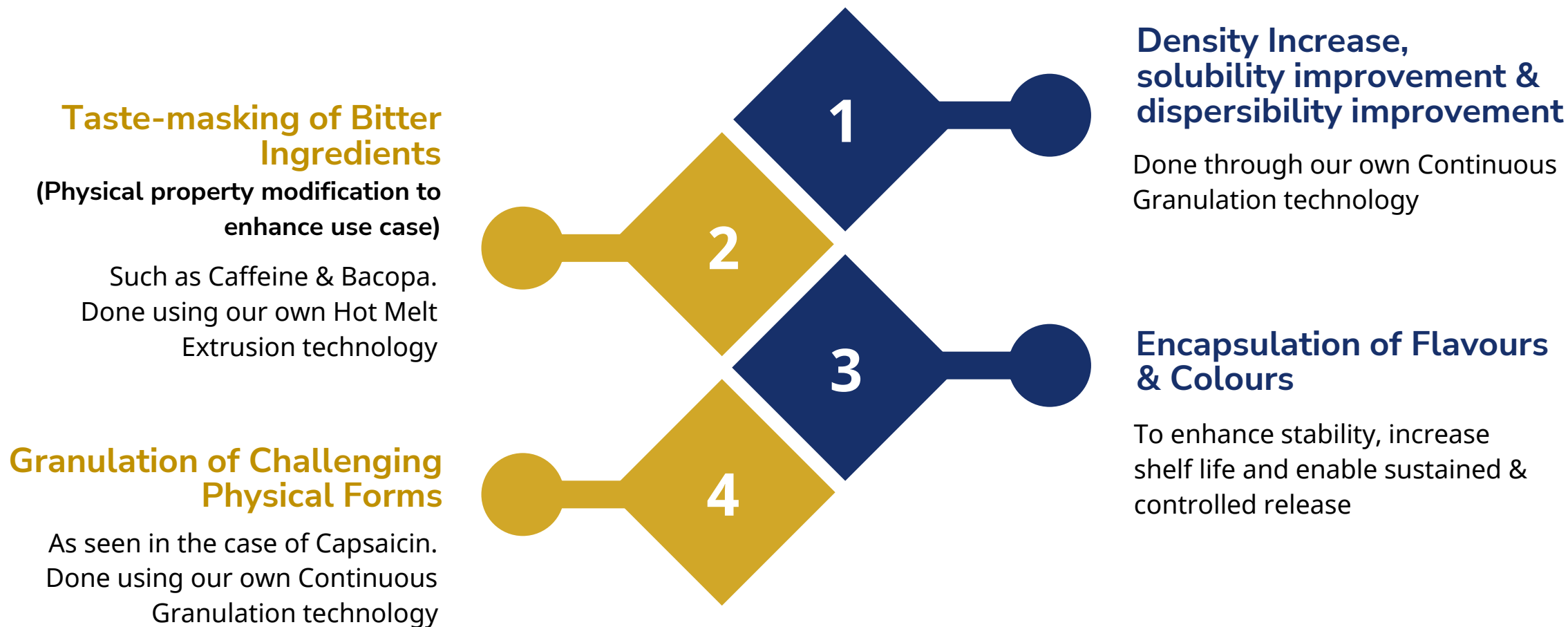


Nutraceuticals

Products Handled

- 2% to 20% Flavour loading
- Products with inclusions such as colours
- Products with varying release profile
- Customized wall materials and particle size
- Products with various levels of complexity

With our novel technologies, we can solve your problems in these application areas





Current challenge: Low density, high pack volume (Capsule compliance)

Traditional process: Requires water and additives

Water: Affects yield; **Additives:** Affect regulatory compliance and claims

Our Solution:

Bulk density increase by proprietary twin screw granulation process

Approach: No additives, no water

Result: Curcumin actives with increased bulk density

Current challenge:

Physical format of the extract is a challenge as it is tough to handle

Traditional Process:

Not feasible due to handling issues

Solution :

Granulation with starches and gums at target dilution

Result :

Capsaicin granules with target dilution and properties



1

Contract Research

Co-Development

2

3

Contract
Manufacturing

Development leading
to Technology Transfer

4



1

A Development Partner with a difference

We deploy the use of next-gen Hot Melt Extrusion technology & Continuous Granulation technology

2

30+ Years of Expertise in HME

As a global leader in Hot Melt Extrusion, we possess the know-how to enable solutions for you

3

Operational Advantages

- Milder process conditions
- Reduced risk of product denaturation
- Customized output material
- Solvent-free process

4

Product Advantages

- Targeted release of encapsulated material
- Novel flavor profiles and end applications
- Improved stability of encapsulated material
- Sustained/delayed release of flavors
- Ability to handle complex formulations and flavor profiles/flavor compounds

5

Proven Know-How of providing solutions to flavour houses

Our highly experienced technical team has executed encapsulation & granulation-based solutions for Flavour houses

6

Flexible Models of Engagement

We provide different models of engagement with the provision to carry out Tech Transfer to Client's Site

Let's Co-Create the Future Together

Your CDMO Partner for Pharma, Nutra & Food Ingredients

✉ samik.sen@steerworld.com | 🌐 www.steerworld.com