



ARROW GREENTECH LTD

INVESTOR PRESENTATION MAY'23

www.arrowgreentech.com

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SAFE HARBOR

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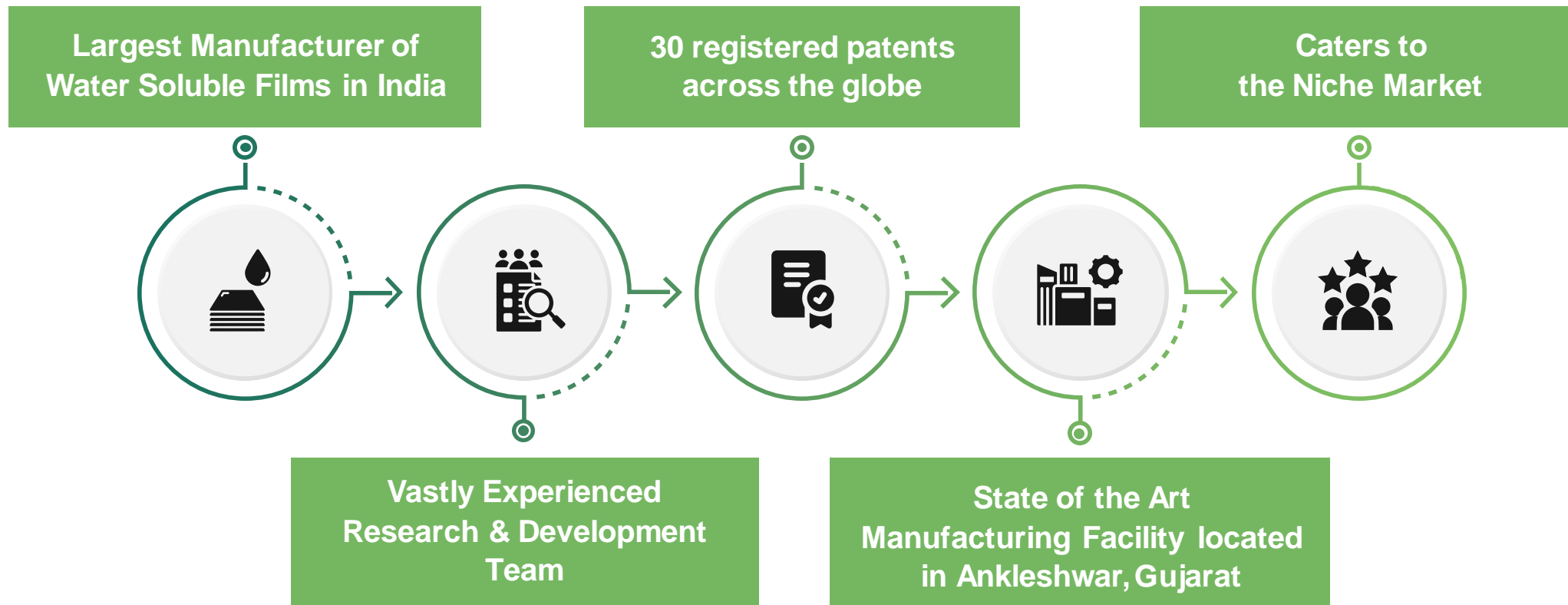
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ABOUT THE COMPANY



ARROW GREENTECH IN A SNAPSHOT...



EXPERIENCED BOARD OF DIRECTORS



Mr. Shilpan P. Patel

Chairman & M.D



Mr. Neil Patel

Jt. Managing Director



Mr. Haresh Mehta

Independent Director



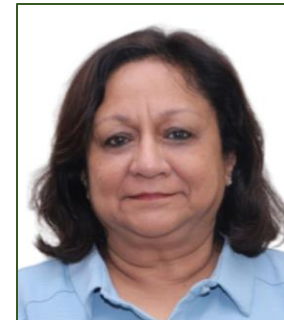
Mr. Harish Mishra

Independent Director



Mr. Dinesh Modi

Independent Director



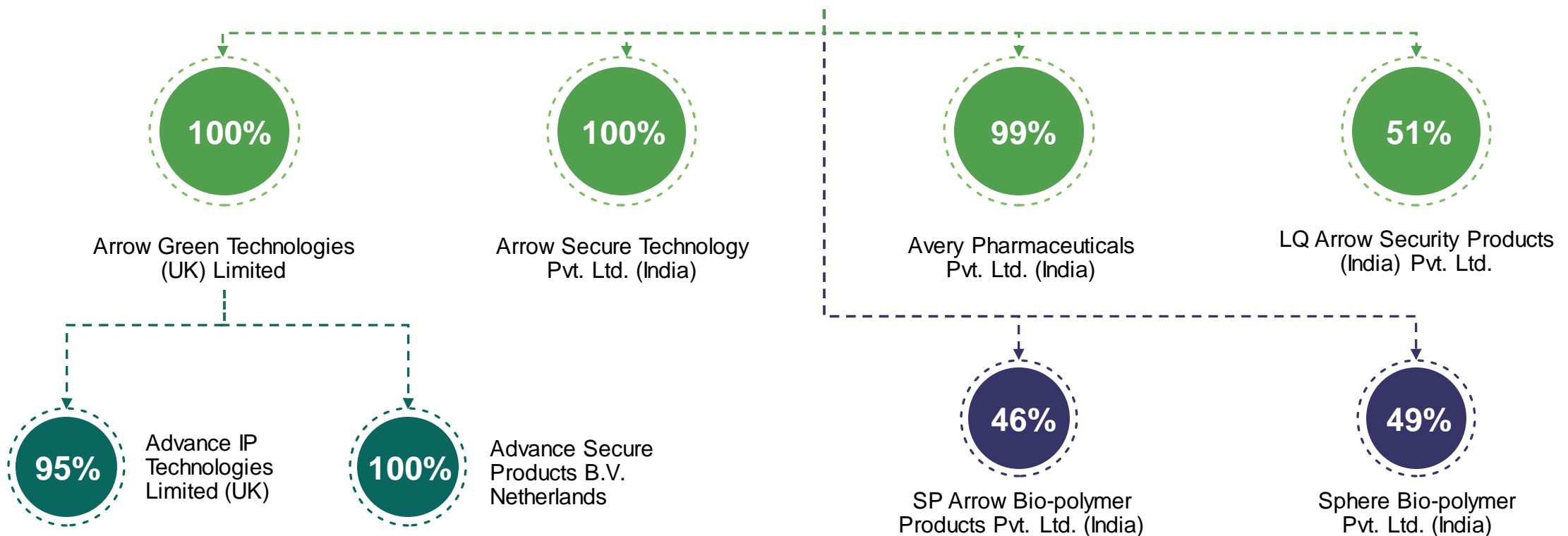
Mrs. Jigisha Patel

Non-Executive Non-Independent
Woman Director

CORPORATE STRUCTURE



Arrow Greentech Limited - India



BUSINESS OVERVIEW

- 1 WSF** Development, Production & Marketing of Wide Range of Water Soluble Films
- 2 Intellectual Property** Total of 30 granted patents across the World across all key business verticals of paper and packing industry, Security products, Health, Hygiene & Food and Printing & PSA Materials
- 3 Security Products** Security products include Anti-counterfeit security thread for high security papers, brand protection technologies etc.
- 4 Avery Pharma** A 100% wholly-owned subsidiary of Arrow Greentech Limited, the company is committed to the cause of enhancing patient outcomes with a novel approach to oral drug administration, via its Mouth Dissolving Strips (MDS)
- 5 Other**

The other segments include Klenz Pro and BioPlast.

KlenzPro: The most concentrated range of hygiene products which are supplied in water-soluble capsules, without generating plastic waste

Bioplast: The bio-compostable film is an eco-friendly alternative to replace single-use plastic for our future generations

Watersol[®]
WATER
SOLUBLE FILM
(WSF)



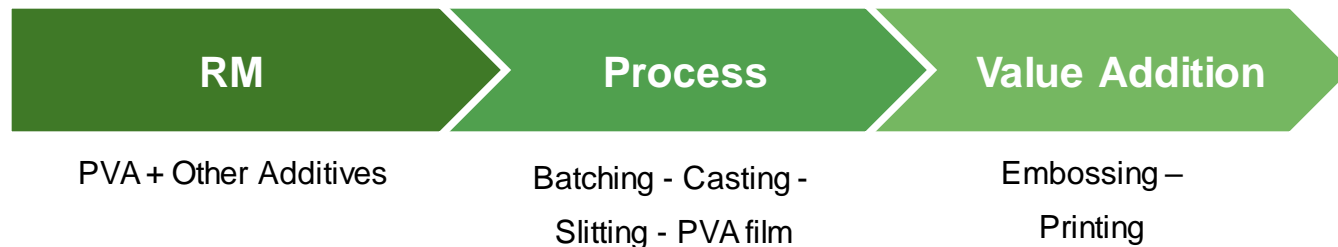
WHAT IS WATER SOLUBLE FILM (WSF)?

Packaging material that is environmentally safe & fully biodegradable when disposed in water.

Arrow manufactures water soluble PVA / PVOH (Poly Vinyl Alcohol) film by solution casting. Casting machines are custom built

Properties of WSF

- Optimum Tensile Strength
- Flexibility for using in multiple forms of packaging
- Excellent Moisture/Heat Sealing
- Eco-friendly



Watersol is the trademark product of Arrow Greentech Ltd.

Applications of WSF

1. Eco Friendly Packaging

(Agrochem Packaging, Detergent Packaging, other Primary Packaging)

2. Industrial Consumables

(Mould release, Embroidery, etc.)

3. Printing

(Hydrographic / Hydro dipping)

4. Laundry Bags

5. Dust Protection film

6. Other Applications

(Battery separator, active embedded film, anti counterfeit film)

FEATURES

01 Optimum tensile strength to handle weight from 10 grams to 10 kg.

02 Excellent moisture/ heat sealing for blocks, bars, powder, and granular product packaging.

03 Helps achieve an Accurate dosing system.

04 Optimum tear strength.

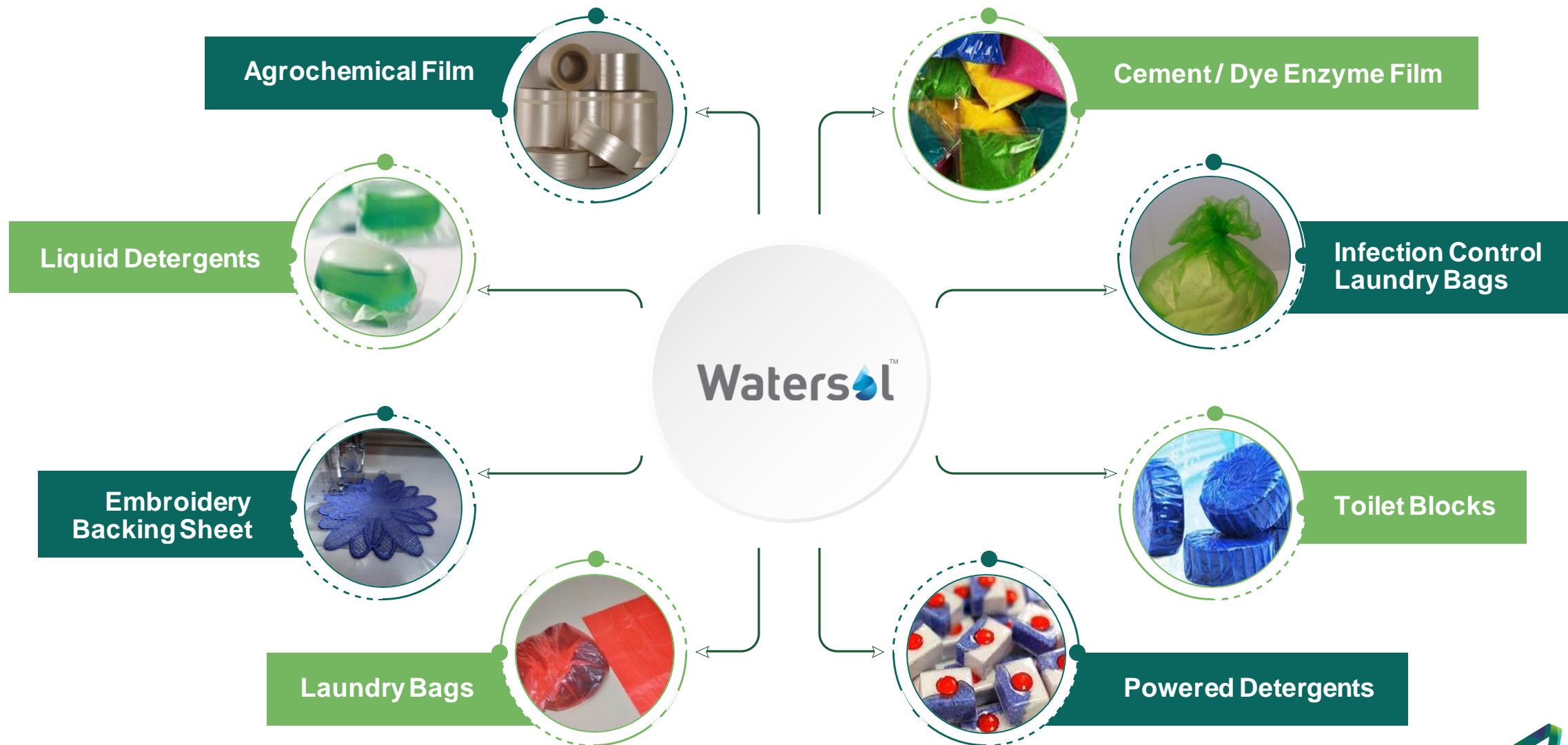
05 Flexible for machine automation.

06 Non-toxic and safe for the environment.

07 High puncture resistance.

08 Excellent organic solvent resistance.

USE OF WATER-SOLUBLE FILM



WATER SOLUBLE FILMS (WSF) INDUSTRY SNAPSHOT



WSF Market size is expected to reach **\$517mn by 2028** at CAGR of

5.7%



~40%

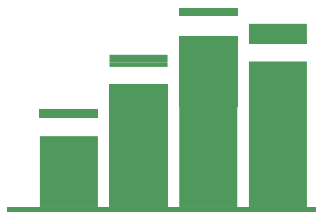
of global market revenue was accounted for by Asia Pacific in 2022



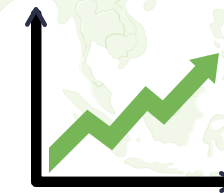
Based on End-use, the Packaging is expected to register a CAGR of

8.3%

The market was valued at **USD 375mn** in 2022



The market is **FRAGMENTED** with many players accounting for majority market revenue share



The burgeoning packaging industry, increasing demand for small or unit dose packs for household items, and the growing concerns for protecting industrial workers from coming in direct contact with hazardous materials represent some of the key factors driving the market.

STATE OF THE ART MANUFACTURING FACILITIES

ANKLESHWAR, GUJARAT

- ✓ ~ 350 Km far from Mumbai
- ✓ Land on 99 years renewable lease from GIDC
- ✓ R&D Centre with Modern Equipments
- ✓ Common Utilities available for future expansion



GLOBAL PRESENCE



- Presence in Europe, Asia, North & South America and Africa – mainly 3 supply points located in India, United Kingdom and South America

- Wide Distribution channel to service our clients from around the world

INTELLECTUAL PROPERTY



INTELLECTUAL PROPERTY

- 01 30 Patents granted across Globe including the India, UK, USA, South Africa, Europe, Eurasia and Russia
- 02 Our inhouse R&D and IP team is continuously working on new innovation and patents
- 03 Monetization of key patents through out-licensing of patents and production of patented products
- 04 Patent filed in the area of security products, brand protection, security papers, security films, self adhesive material, healthcare, bio-compostable material etc.
- 05 State of Art R&D Lab and IP cell in Mumbai
- 06 Innovation is focused on green and high-tech products
- 07 28 Indian patent applications and 8 foreign patent applications under process covering various sectors and geographies.

ARROW'S INTELLECTUAL PROPERTY

1. Granted Patents:

Arrow Greentech Limited at present has 30 granted patents globally covering the territories of – India, UK, USA, South Africa, Europe, Eurasia and Russia

2. Patent Applications:

Arrow Greentech Limited also has 28 Indian patent applications and 8 foreign patent applications under process covering various sectors, through mainly covering Water-Soluble Films and Security Section.

3. Trademarks:

Arrow Greentech Limited has 27 in-force registered Trademarks along with 13 Trademark application currently under processing.

Group 1 – Paper and Packing Industry

1. High strength paper and process of manufacture			2. High security paper and process of manufacture			3. Self destructive irreversible security packaging film				4. Method of producing a high security film and high security film produced by the said method		
India (23.09.09)	South Africa (28.10.09)	United States (22.11.11)	Russia (20.01.11)	Europe (13/09/2017)	India (03/01/2018)	India (21.01.09)	Eurasia (30.12.09)	Europe (05.05.10)	United States (23.08.2016) (Div) (07/12/2021)	United States (29.05.12)	Europe (15.08.12)	India (31/10/2018)

Group 2 – Packaging Industry

1. Packaging Material		2. High strength paper and process of manufacture			3. Self destructive irreversible security packaging film				4. A biodegradable, multilayered film and a package made thereof	5. Edible water soluble packaging film and package made out of the said film
India (07.11.08)	South Africa (27.05.09)	India (23.09.09)	South Africa (28.10.09)	United States (22.11.11)	India (21.01.09)	Eurasia (30.12.09)	Europe (05.05.10)	United States (23.08.2016) (Div) (07/12/2021)	India 253018 (14.06.12)	India 252848 05.06.12)

Group 3 – Security Products

1. High security paper and process of manufacture			2. Self destructive irreversible security packaging film				3. Method of producing a high security film and high security film produced by the said method			4. Bio Degradable Smart Cards
Russia (20.01.11)	Europe (13/09/2017)	India (03/01/2018)	India (21.01.09)	Eurasia (30.12.09)	Europe (05.05.10)	United States (23.08.2016) (Div) (07-12-2021)	United States (29.05.12)	Europe (15.08.12)	India (31/10/2018)	India 286452 (21/08/2017)

Group 4 – Health, Hygiene & Food

1. Packaging Material		2. Edible water soluble packaging film and package made out of the said film	3. A water soluble film based matrix to contain samples extracted from living species			4. Water Soluble Drug delivery system	5. A Cleaning Device with Sustained Release of Actives
India (07.11.08)	South Africa (27.05.09)	India (05.06.12)	India (27.03.12)	Europe (14/07/2013)	USA (18/03/2014)	United Kingdom	India (01/02/2023)

Group 5 – Printing and PSA Materials

1. Substrate for ink jet printing with hydrophobic solvent based ink	2. Wide format printed graphics without release liner	3. Self adhesive materials with a water soluble protective layer			4. Self Adhesive Wall Paper with Reduced Adhesive Material and Water Soluble Film
India (09.04.07)	India (27.12.10)	South Africa (31.12.08)	India (28.12.10)	United States (09.11.10)	India (16/03/2023)

Key Granted Patents across the Globe

30

PATENTS GRANTED
across the world

Health

- Mouth Melting strips, Gel strips, Enzyme strips,
- Vitamins, Drugs, Medicine, Disinfectants and other Pharma ingredients
- For clinical setting like blood, serum, urine testing etc.

Hygiene

- Used to add Active ingredients of Detergents, Softeners, Cleaning Laundry, Dishes, Floorings, Walls, Furnitures and other cleaning agents that are retained and remained intact for a longer time

Packaging

- Used in agronutrients such as fertilizers, urea, agrochemicals etc.
- Used for packaging for food products, liquid cement, shopping bags etc. or other biodegradable material

Security

- Used in making security labels or secure packaging of the products for identification
- Used in manufacturing of security documents such as cheques, bank notes, passport papers etc.

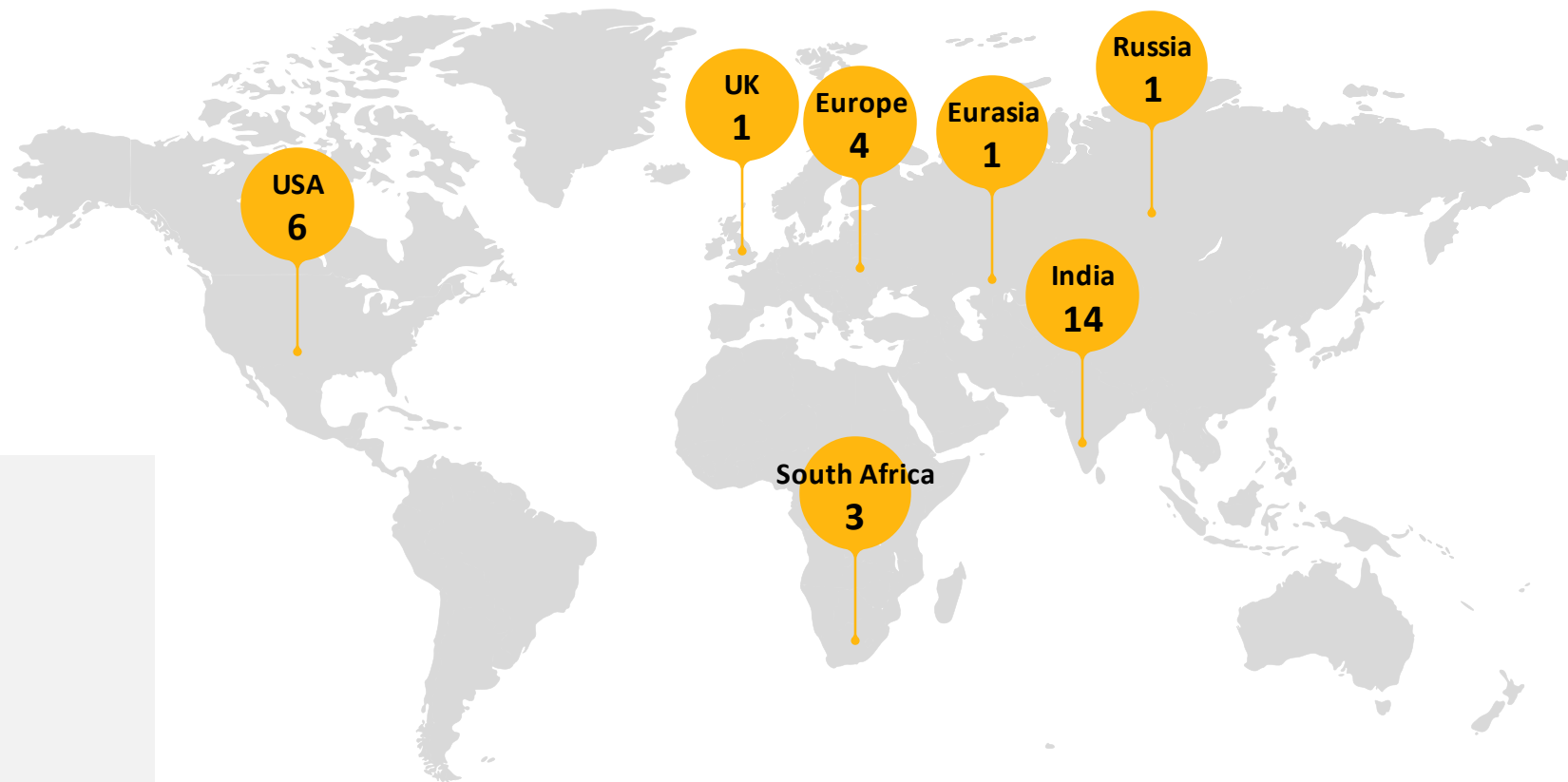
Printing

- Used for printing sarees, net or perforated cloth
- Used for printing paper, vinyl
- Used in printing of hoardings, one-way vision films

Self-Adhesive

- Used in making labels for product identification and/or advertising etc.

Key Granted Patents across the Globe



Region	India	South Africa	Europe	USA	UK	Eurasia	Russia
No. of Patents Granted	14	3	4	6	1	1	1

SECURITY PRODUCTS



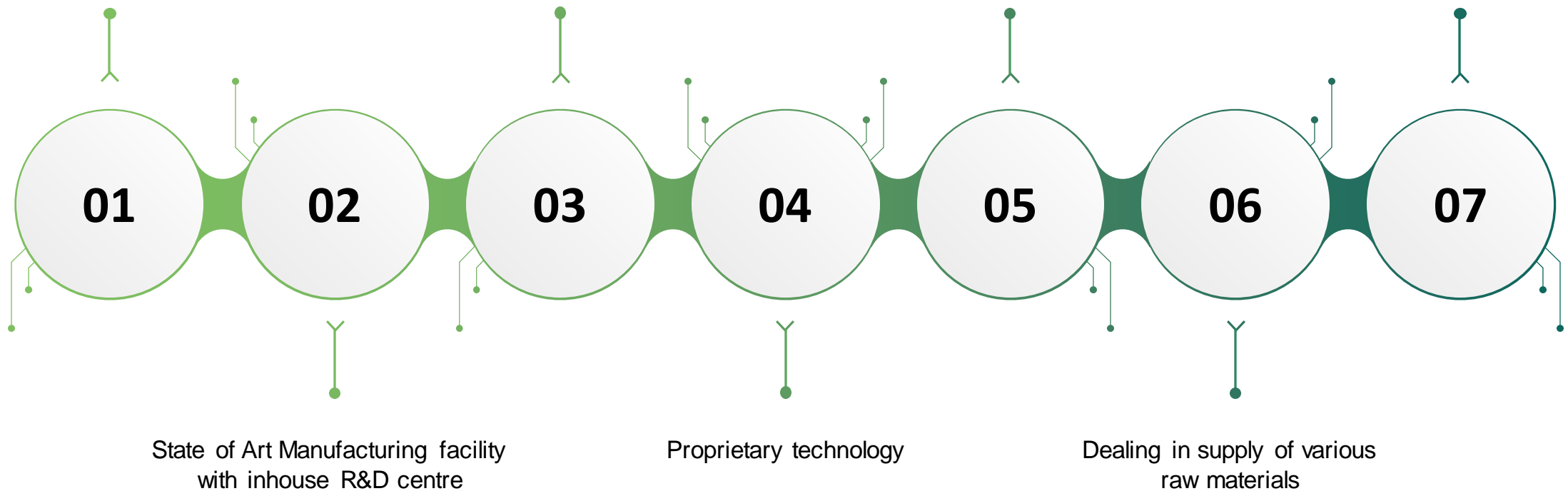
SECURITY PRODUCTS

Manufacturing of anti-counterfeit products, security threads for use in bank note papers or other security papers, brand protection etc.

Supplier to leading paper mills

Part of the niche group supplying such products globally

100% indigenous technologies & fully integrated technologies



**ARROW
RX**



ARROW RX

- 01 Avery Pharmaceuticals Pvt Ltd is 100% Subsidiary company of Arrow Greentech Limited
- 02 Manufacturing of Mouth Dissolving Strips (Pharmaceuticals & Nutraceuticals)
- 03 WHO GMP approved manufacturing facility with state of art plant & machinery and in-house product development center in Sanand (Gujarat)
- 04 Product Approval from Food and Drug Controller Administration (FDCA) and Central FSSAI License received for approx. 40 products including Sildenafil, Ondansetron, Amlodipine, Vitamin D3, Vitamin B12, Vitamin K2, Vitamin B3, Folic Acid, Iron, Zinc strips etc.
- 05 Who-GMP, FSSAI, GLP, ISO 9001 and ISO 22000 certified facility
- 06 Expertise from parent company on casting of film and embedding various APIs
- 07 Commercial production began in August 2022
- 08 Long-term contract signed with big MNC company for export markets
- 09 In discussion with various domestic and international companies for long-term supply contract

PRODUCT DEVELOPMENT & APPROVALS

List of FASSAI Products

SR No	Name of Product	Strength
1	Ascorbic Acid 40 mg and Zinc 10 mg Orally Disintegrating Strips	40mg+ 10mg
2	Ascorbic Acid 40 mg, Cholecalciferol 600 IU and Zinc 10 mg Orally Disintegrating Strips	40mg+ 600 IU+ 10mg
3	Ascorbic Acid Orally Disintegrating Strips 50 mg	50mg
4	Ashwagandha Orally Disintegrating Strips 100 mg	100mg
5	Caffeine Orally Disintegrating Strips 50 mg	50mg
6	Cholecalciferol and Vitamin K2 Orally Disintegrating Strips	600 IU+ 55mcg
7	Cholecalciferol Orally Disintegrating Strips 1000 IU	1000 IU
8	Cholecalciferol Orally Disintegrating Strips 2000 IU	2000 IU
9	Cholecalciferol Orally Disintegrating Strips 600 IU	600 IU
10	Cholecalciferol Orally Disintegrating Strips 800 IU	800 IU
11	Cholecalciferol, Vitamin K2 and Calcium Orally Disintegrating Strips	600 IU+ 55mcg+ 1000mg
12	Clove Orally Disintegrating Strips 8 mg	8mg
13	Curcumin 45 mg and Piperine 5 mg Orally Disintegrating Strips	45mg+ 5mg
14	Curcumin Orally Disintegrating Strips 100 mg	100mg
15	Cynocobalamin Orally Disintegrating Strips 1000 mcg	1000mcg
16	Cynocobalamin Orally Disintegrating Strips 1500 mcg	1500mcg
17	Cynocobalamin Orally Disintegrating Strips 500 mcg	500mcg
18	Folic Acid 400 mcg	400mcg
19	Folic Acid 500 mcg	500mcg
20	Food Grade Edible Film for Packaging	NA
21	Lactoferrin Orally Disintegrating Strips 10 mg	10mg

SR No	Name of Product	Strength
22	Lactoferrin Orally Disintegrating Strips 5 mg	5mg
23	Melatonin 10 mg and Valerian 3 mg Orally Disintegrating Strips	10mg+ 3mg
24	Melatonin 10 mg, HOPS 4 mg and Valerian 3 mg Orally Disintegrating Strips	10mg+ 4mg+ 3mg
25	Melatonin Orally Disintegrating Strips 0.5 mg	0.5mg
26	Melatonin Orally Disintegrating Strips 1 mg	1mg
27	Melatonin Orally Disintegrating Strips 10 mg	10mg
28	Melatonin Orally Disintegrating Strips 3 mg	3mg
29	Melatonin Orally Disintegrating Strips 5 mg	5mg
30	Vitamin B Complex Orally Disintegrating Strips	NA
31	Vitamin K2 Orally Disintegrating Strips 55 mcg	55mcg
32	Melatonin Strips	3mg
33	Vitamin B12 Strips	500 to 1500mcg
34	Vitamin D3 Strips	400 IU to 10,000 IU
35	Vitamin K2 Strips	200mcg
36	Vitamin K2+ D3 Strips	200mcg + 2000 IU
37	Vitamin B3 Oral Strips	75mg
38	B- Complex Strips	NA
39	Folic Acid Strips	400mcg
40	Astaxanthin Strips	10mg
41	Iron Strips	16mg
42	Zinc Strips	40mg

PRODUCT DEVELOPMENT & APPROVALS

List of RX Approved Products

Sr.no.	Name of Product	Strength	Grade
1	Sildenafil Citrate	25 mg	IP
2	Sildenafil Citrate	50 mg	IP
3	Ondansetron Hydrochloride Dihydrate	4 mg	IP
4	Ondansetron Hydrochloride Dihydrate	8 mg	IP
5	Amlodipine Besylate	5 mg	IP
6	Amlodipine Besylate	10 mg	IP
7	Sildenafil Citrate	25 mg	USP
8	Sildenafil Citrate	50 mg	USP
9	Ondansetron Hydrochloride Dihydrate	4 mg	USP
10	Ondansetron Hydrochloride Dihydrate	8 mg	USP
11	Vitamin D3 (Cholecalciferol)	2000 IU	IP
12	Vitamin B12 (Methylcobalamin)	1500 mcg	IP
13	Eliglustat Sublingual Film	12/16/20/24 mg	IH
14	Tadalafil	10/20 mg	USP
15	Nicotine Polacrilex	2/4 mg	USP

- Various other products are under development or approval phase
- Inhouse product development team is continuously working on new development and innovation

ARROW RX



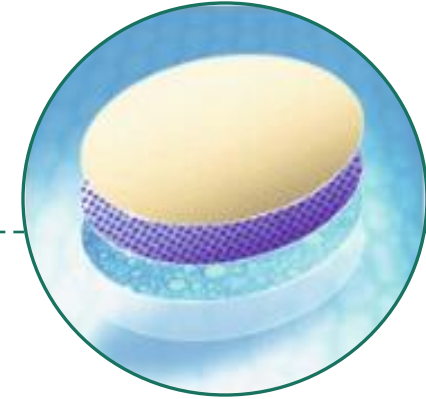
MDS™ Films – NDDS

- Mouth Dissolving Strips (MDS) - Thin Films loaded with Actives for Drug Delivery
- Taken Orally and melts instantaneously in the mouth when placed on or under the tongue
- The active substance enters the bloodstream directly via the oral mucosa without having to pass through the gastrointestinal tract



Novel Drug Delivery Device -NDDD

- DDD contains Actives embedded within and/or coated upon Water Soluble or Water Dispersible Polymers
- The active ingredients are released at a precise – controlled rate from a readily soluble polymer into an aqueous environment through one or more perforated bio-digestible films, post which DDD dissolves overtime and is bio absorbed over time



RX Matrix

- Novel system of collecting and storing blood samples, urine samples, serum samples or any other type of samples extracted from living species to avoid cross infection or spillage of the samples
- It eliminates the problem of disposal of used containers
- Non contaminating container for collecting liquid and semi solid bio waste

ARROW RX

1. Granted Patent for Actives Embedded Water Soluble film (WSF).
2. One or more actives can be embedded or entrapped at selected concentrations and dispositions therein such that the material embedded can be delivered at precise and selected dosages to the point of application
3. Arrow Trade Name – MDS “Mouth Dissolving Strips”
4. Drug gets delivered by three different routes i.e. Lingual, Sublingual and Buccal. The three different route offers benefits of Quick onset of action and sustained release of drug for any of the categories of patients especially, veterinary, psychosomatic, schizophrenic, pediatric and geriatric patients
5. Identified various molecules to be embedded in WSF in first phase

Why Arrow MDS

- Quick dissolve, that help in quick reaction for drug
- Easy to intake.
- Suitable for patient population that fears choking such as pediatric geriatric patients and patients with nervous disorders.
- Do not require water intake
- Bitter drug can be flavoured
- Enables faster systemic absorption and bypass hepatic metabolism. hence improves bioavailability of drug.
- Reduces side effects as low in chemical combinations

FINANCIAL OVERVIEW



Consolidated Profit & Loss Statement

Rs. In Mn

Particulars	Q4FY23	Q3FY23	QoQ	Q4FY22	FY23	FY22	YoY
Revenue from Operations	481	311	54.9%	45	1,088	337	223.0%
Other Income	13	1	-	6	24	17	39.9%
Total Income	494	311	58.7%	51	1111	354	214.3%
Cost of Goods Sold	195	148	31.7%	32	543	194	180.4%
Gross Profit	287	163	76.0%	13	545	143	280.7%
Gross Profit Margins %	59.5%	52.4%	-	28.1%	50.1%	42.5%	-
Employee Expenses	30	32	-5.0%	18	108	71	51.8%
Other Expenses	70	47	50.6%	43	202	146	38.9%
EBIDTA	186	84	120.8%	-49	235	-73	-
EBIDTA Margins %	38.7%	27.1%	-	-	21.6%	-21.8%	-
Depreciation	18	21	-15.9%	14	67	47	42.1%
Financial Cost	4	2	72.7%	2	12	7	74.2%
PBT	177	61	188.4%	-58	180	-110	-
PBT Margins %	35.8%	19.7%	-	-	16.2%	-31.1%	-
Tax	49	25	94.0%	-15	58	-17	-
PAT	128	36	253.4%	-43	123	-93	-
PAT Margins %	26.0%	11.7%	-	-	11.0%	-26.2%	-
EPS (Rs.)	8.9	2.6	243.4%	-3.1	8.5	-6.6	-

Consolidated Balance Sheet

Rs. In Mn

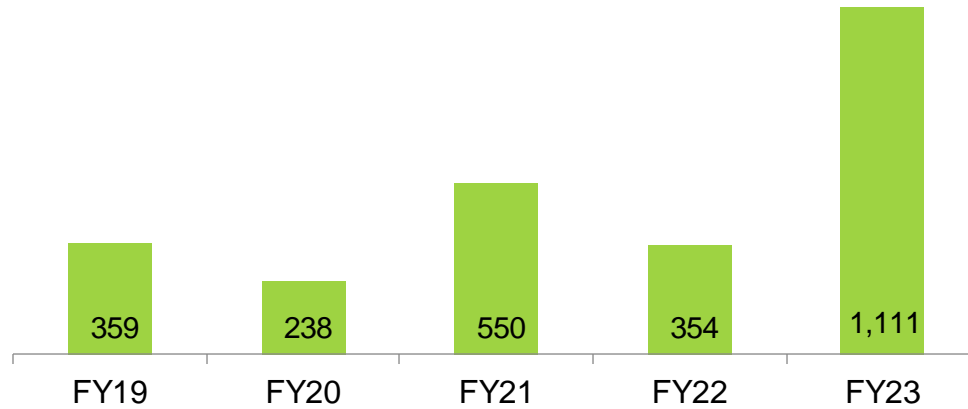
Particulars (Rs. In Mn)	Mar-23	Mar-22
Equities & Liabilities		
Equity Share Capital	151	141
Other Equity	831	606
Equity Attributive to Owners	982	747
Non Controlling Interest	21	21
Total Equity	1,003	768
Non-Current Liabilities		
Long-term Borrowings	9	23
Provisions	3	2.
Lease Liabilities	9	11
Income Tax Liabilities (Net)	23	
Total of Non-current liabilities	44	36
Current Liabilities		
Short Term Borrowings	13	12
Trade Payables	101	32
Other Financial Liabilities	40	29
Lease Liabilities	3	2
Provisions	3	4
Other Current Liabilities	7	5
Total Current Liabilities	168	83
Total Liabilities	212	119
Total Equity and Liabilities	1,215	887

Particulars (Rs. In Mn)	Mar-23	Mar-22
Assets		
Non-Current Assets		
Property, Plant & Equipment	335	234
Right of Use Assets	9	10
Capital Work In Progress	2	124
Investment Property	1	1
Other Intangible Assets	24	34
Intangible assets under development	10	10
Financial Assets		
Investments	4	12
Other Financial Assets	7	6
Deferred Tax Assets	46	43
Income Tax Assets	0	8
Other Non-current Assets	10	14
Total Non-Current Financial Assets	447	496
Current Assets		
Inventories	150	67
Current Financial Assets		
Trade Receivables	263	37
Cash & Cash Equivalents	71	98
Bank Balance Other than (ii) above	218	106
Loans	0	0
Other Financials Assets	2	2
Other Current Assets	63	81
Total Current Assets	767	390
Total Assets	1,215	887

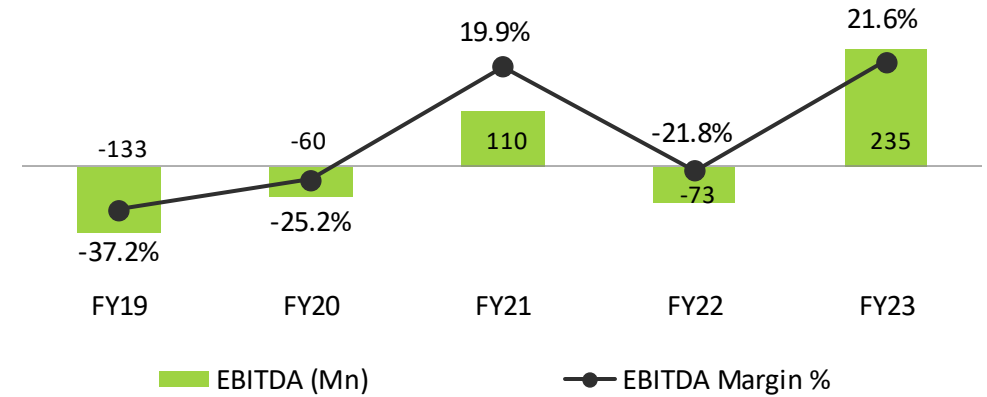
Yearly Overview

Rs. In Mn

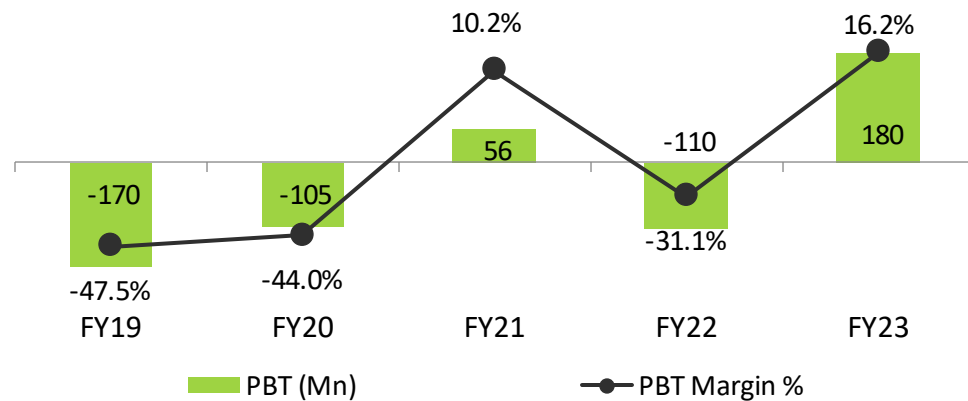
Total Revenue



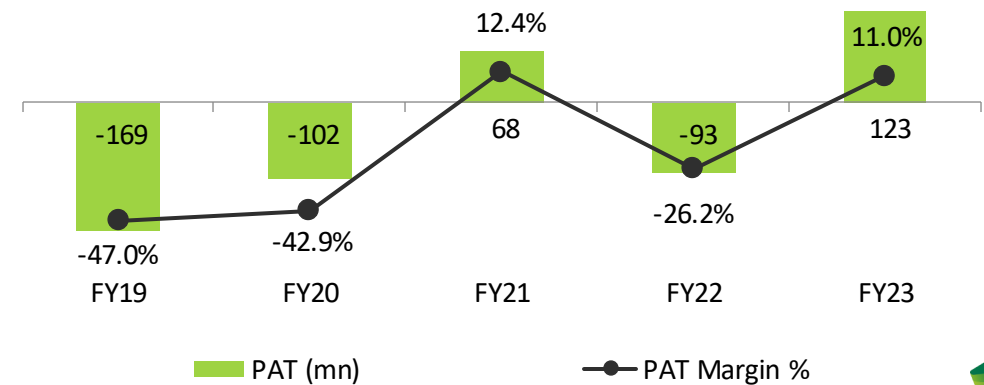
EBIDTA & EBIDTA Margin



PBT & PBT Margin



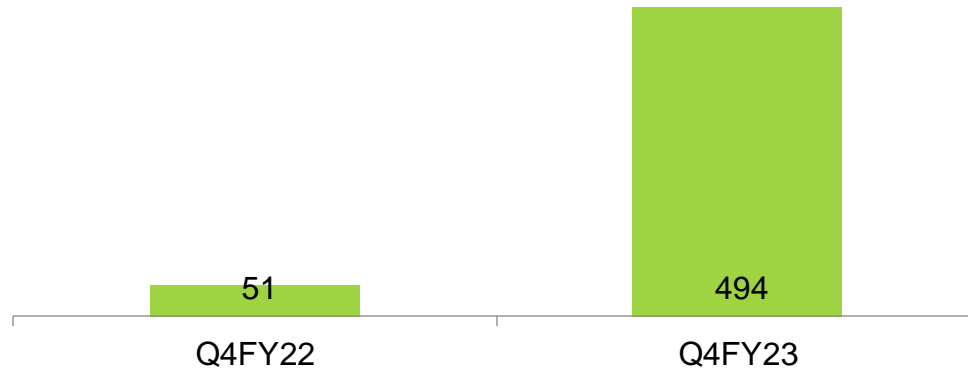
PAT & PAT Margin



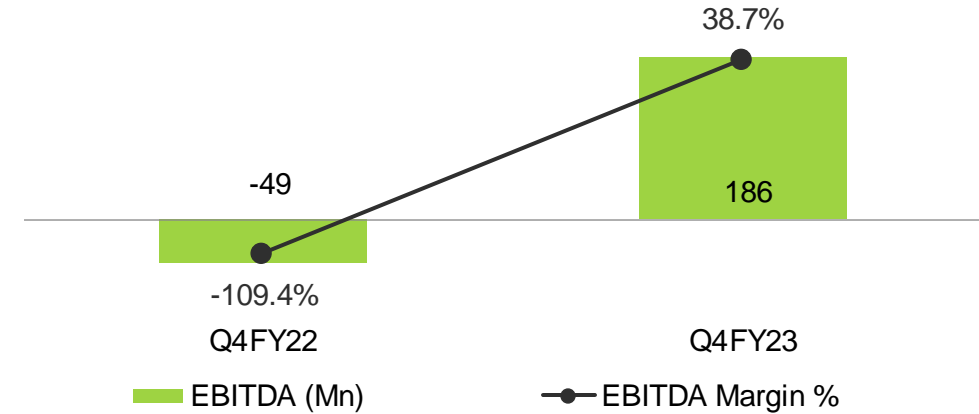
Quarterly Overview

Rs. In Mn

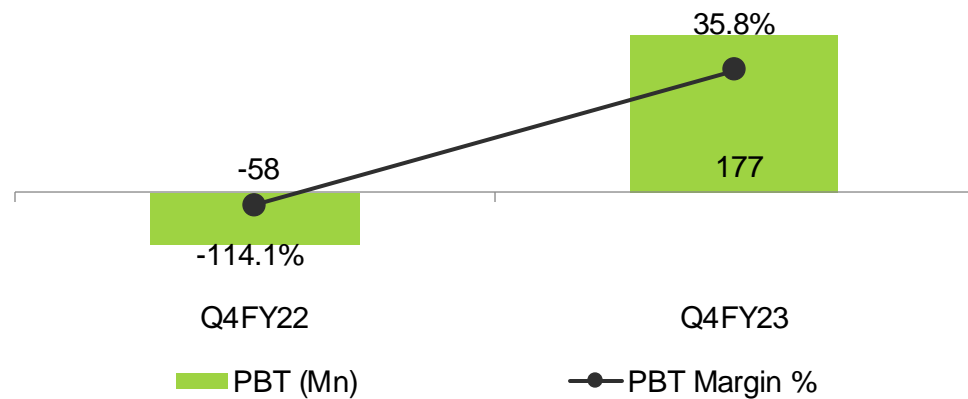
Total Revenue



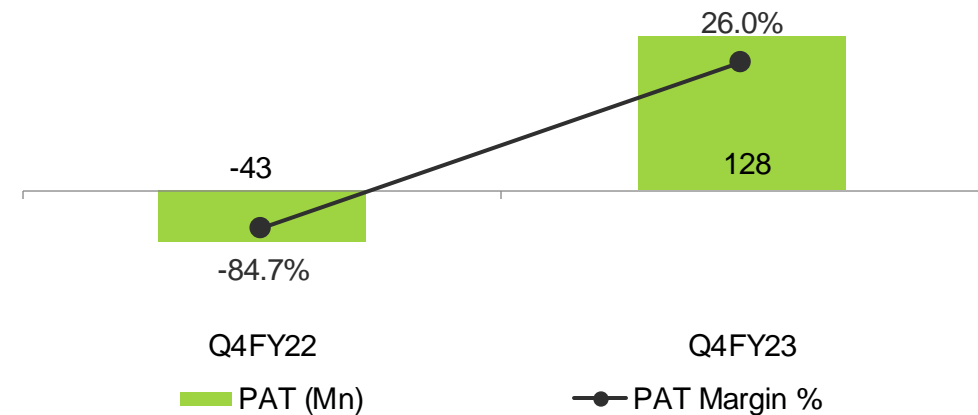
EBIDTA & EBIDTA Margin



PBT & PBT Margin

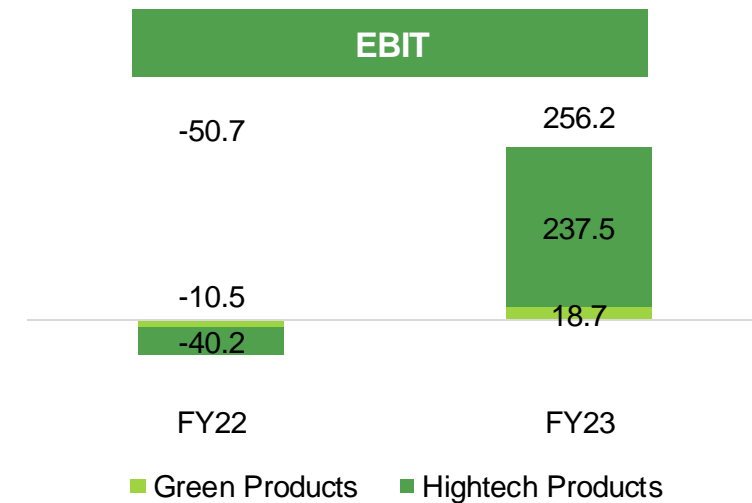
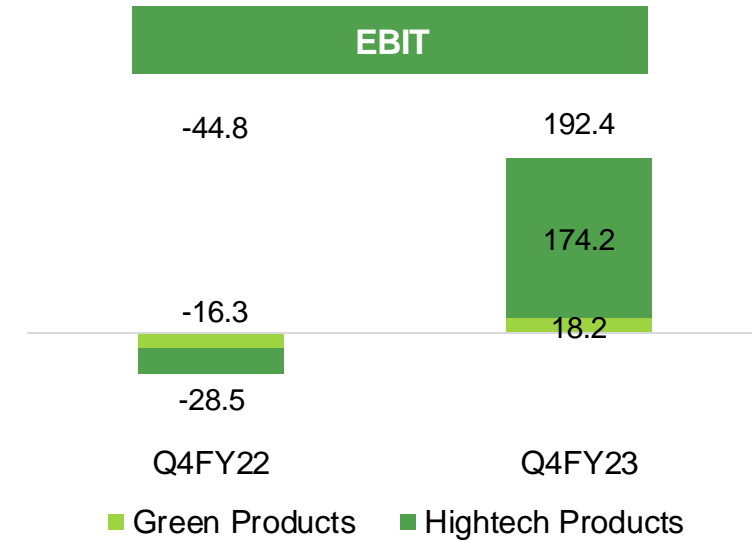
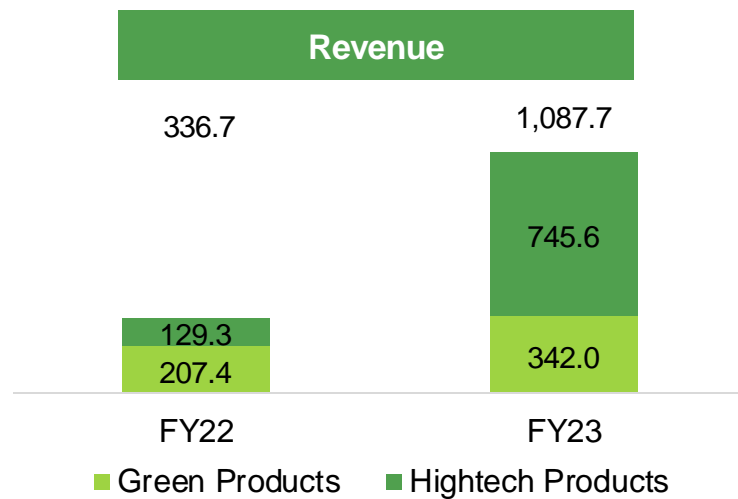
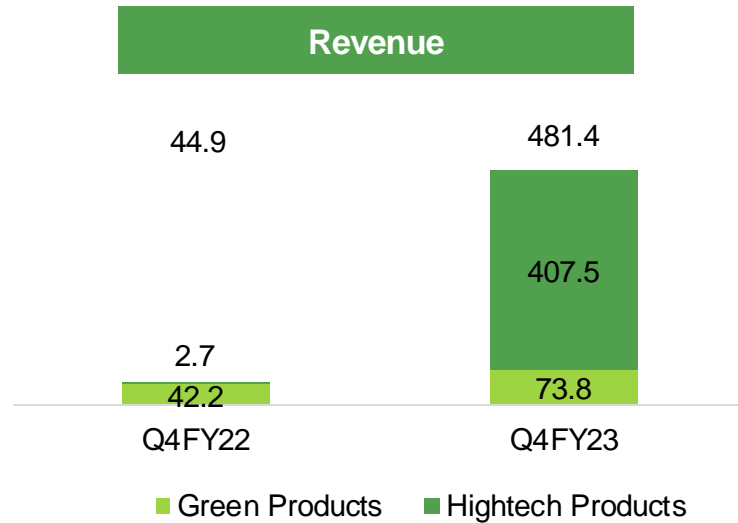


PAT & PAT Margin



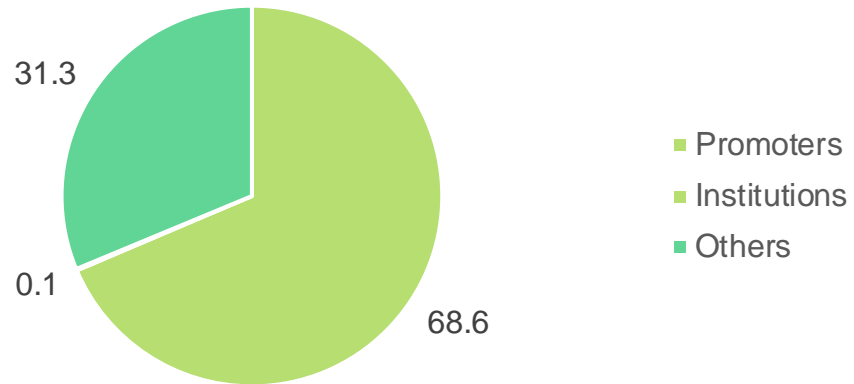
Segmental Break-up

Rs. In Mn



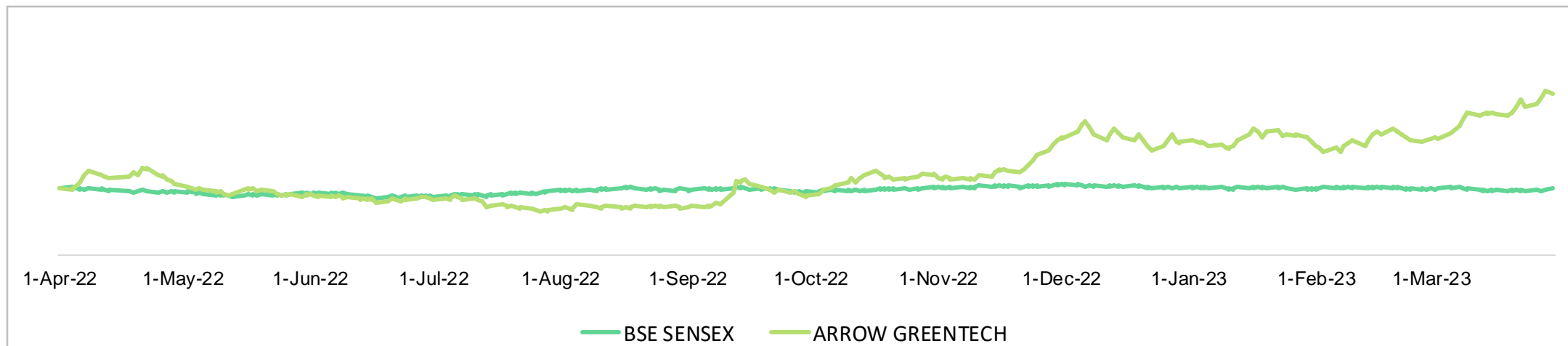
Stock Information

Shareholding Pattern



Stock Information (as on 31st March 2023)

Market Cap. (in crores)	385.9
Stock Price	255.8
52 Week (High / Low)	273.8 / 68.0
Symbol (BSE) / (NSE)	516064 / ARROWGREEN
Free Float (No. of Shares)	4,737,383
Average Daily Volume (3months) - BSE	6,385



THANK YOU

ARROW GREENTECH LTD

CIN: L21010MH1992PLC069281

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