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HOLDINGS

6th CSIR CONFERENCE

BUILDING A WORLD CLASS, GLOBALLY COMPETITIVE PHARMACEUTICAL BUSINESS OUT OF SOUTH AFRICA

Stavros Nicolaou

5 October 2017

Humble beginnings - Greyville

Notre Dame de Bondeville

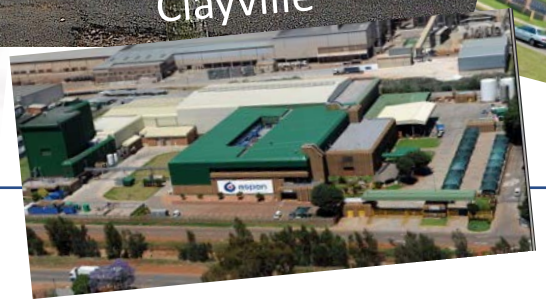
Oss - Netherlands

East London

Port Elizabeth

Cape Town

Clayville



Evolution of Aspen's Manufacturing Base

- Aspen General Facility has been on the present site for approximately 70 years
- Acquired by Aspen from South African Druggists in March 1999, together with facilities in East London and Johannesburg
- Mainly supplied the South African market
- Within 15 years, Aspen has transformed from being a domestically accredited supplier to an international pharmaceutical manufacturer with the developed capability to supply various dosage forms to any pharmaceutical market in the world
- In the last 10 years, billions have been invested in the Group's South African facilities for infrastructural expansion and enhancements to improve compliance to the relevant regulatory standards, and in order to support Aspen's sustained supply to both its domestic and diverse international markets

Aerial view of Aspen's Global Manufacturing Base in Port Elizabeth

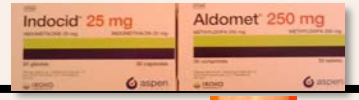
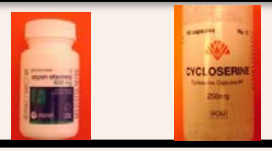
Regulatory Authorities Relevant to South African Operations

Regulatory Authority	PE Unit 1	PE Unit 2	PE Unit 3	SVP	International Distribution ADC	SA Distribution ACW
MCC	**X**	**X**	**X**	**X**	**X**	**X**
FDA	**X**	**X**		**X**	**X**	
MHRA	**X**	**X**		**# planned on product submission**	**X**	
WHO	**X**	**X**		**X**	**X**	
TGA	**X**	**X**		**X**	**X**	
Anvisa (Brazil)	**X**	**X**		**X**	**X**	
	High volume solid manufacturing for domestic and export markets	Small to medium volume solid manufacturing for domestic and export markets: fluid-bed dried products (2A) & oven dried products (2B)	End state solid packing for domestic market	Eye drops, lyophilized vials, ampoules and vials for domestic and export markets	Warehousing for domestic and export markets	Warehousing for domestic market

x = Approved

 # = Inspection planned

Strategic Manufacturing Partnerships

Boehringer Ingelheim	Boehringer Ingelheim	Nevirapine	
gsk GlaxoSmithKline	GSK	Lamivudine, Zidovudine, Combivir, Epivir & Others	
Bristol-Myers Squibb	BMS	Stavudine, Didanosine, Atazanavir	
GILEAD Advancing Therapeutics. Improving Lives.	Gilead	Tenofovir & Emtricitabine	Viread Truvada
MSD	MSD	Efavirenz	
IROKO PHARMACEUTICALS, LLC	Iroko	Aldomet and Indocid	
Lilly	Eli Lilly	Cycloserine and Capreomycin	
BAYER	Bayer	Nur- Isterate Injection	
PrestigeBrands Inc.	Prestige Brands	Murine & Murine Plus Range of Eye Drop Products	

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Group revenue | by customer geography

Revenue by customer geography

R'million	FY 2017	FY 2016	% change	FY 2016 (CER)*	% change
Developed Europe	11 431	11 100	3%	10 161	13%
Asia Pacific	10 957	7 738	42%	7 490	46%
Sub-Saharan Africa	9 892	9 355	6%	9 185	8%
Latin America	4 184	3 481	20%	3 254	29%
Developing Europe and CIS	2 589	2 345	10%	2 223	16%
MENA	1 117	878	27%	820	36%
USA & Canada	1 043	662	58%	618	69%
Total	**41 213**	**35 559**	**16%**	**33 751**	**22%**

* FY 2016 restated at FY 2017 average exchange rates

- Performance in ZAR is determined by
  - Fluctuations in exchange rate; and
  - Underlying operational performance
- Exchange rate effect
  - Variance between actual and constant exchange rate (CER)
- CER reflects the underlying operational performance

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The evolution of Aspen

Commercial Pharma

- Geographic diversity
- Product portfolio

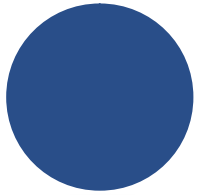
Manufacturing Capacity and Capability

- Finished Dose Form
- API

Commercial Pharma | geographic diversity

FY 2000

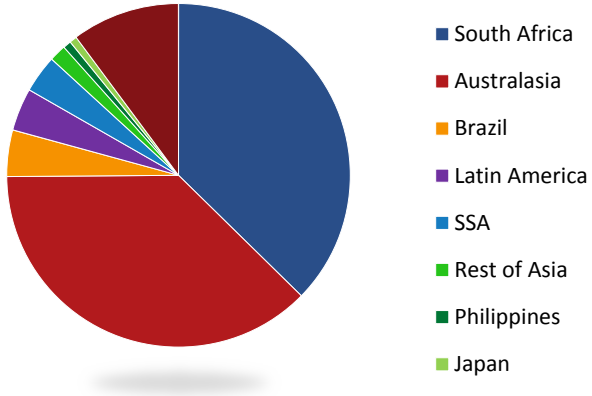
Sales R1.0 billion



South Africa only

FY 2013

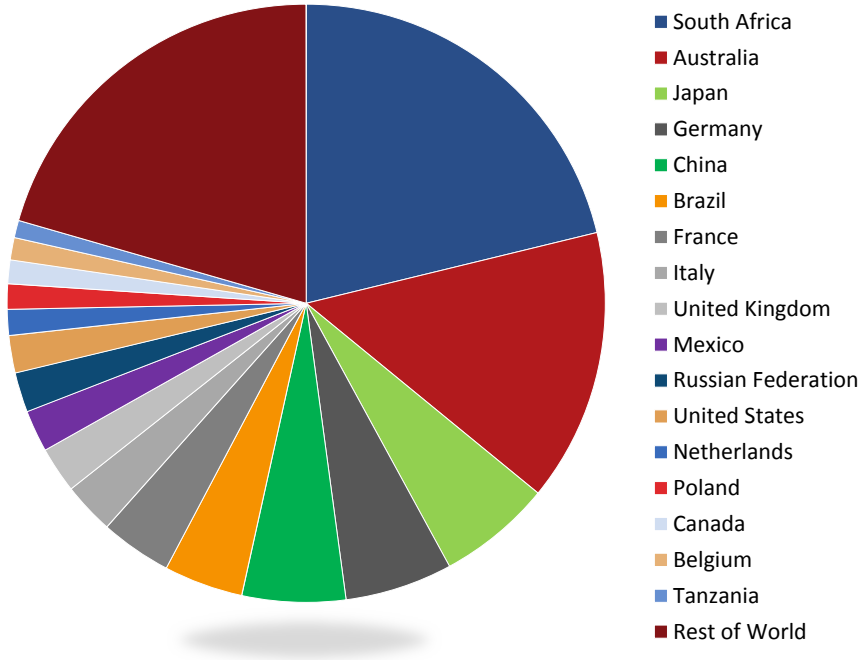
Sales R18.6 billion



Predominantly SA and Australia

FY 2017

Sales R31.4 billion

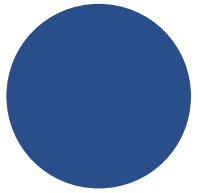


Global Multinational

In FY2017, there was a further ±R10 billion of revenue from Nutritionals and Manufacturing

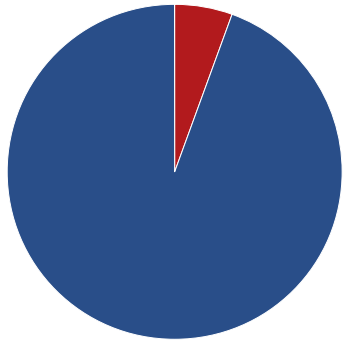
Commercial Pharma | product portfolio

FY 2000
Sales R1.0 billion



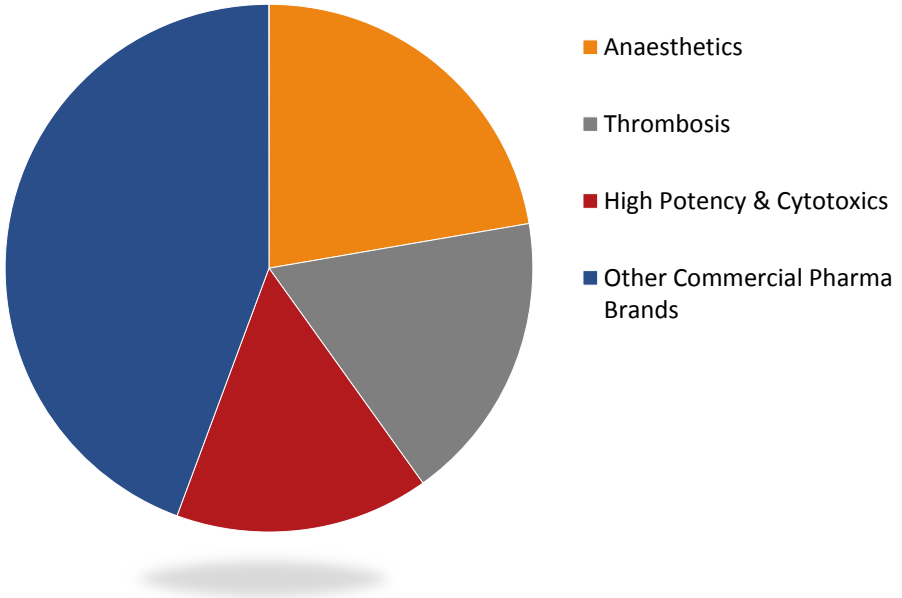
Other Commercial Pharma Brands

FY 2013
Sales R18.6 billion



Predominantly Other Commercial Pharma Brands with limited therapeutic focused brands

FY 2017
Sales R31.4 billion



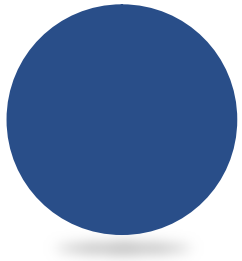
Global and diverse product range with a focus on Speciality

FY 2017:
- *SA < 50% of Other Commercial Pharma brands*
- *Generics account for ±10% of sales*

Manufacturing | FDF capacity & capability

FY 2000

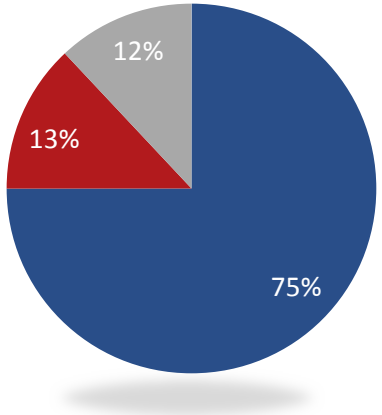
Tablets only



PE - Tablets

FY 2013

Predominantly solids with some Speciality



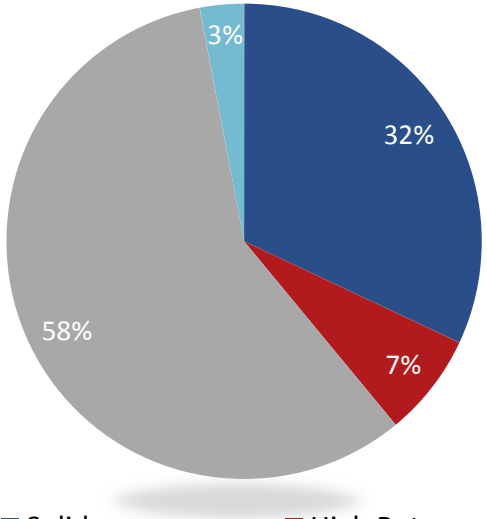
Solids High Potency Steriles

+

- **BO** - High Potency
- **PE** – Lyophilisation & Eye drops

FY 2017

Dominant sterile platform with Speciality & Solids



Solids High Potency
Steriles Semisolids/Liquids

+

- **PE** – High Potency & Cytotoxics Steriles (amps & vials)
- **BO** – Hormonal creams
- **NDB** – Prefilled syringes

FY2022

Further evolution to Sterile Manufacturing

Anaesthesia Products

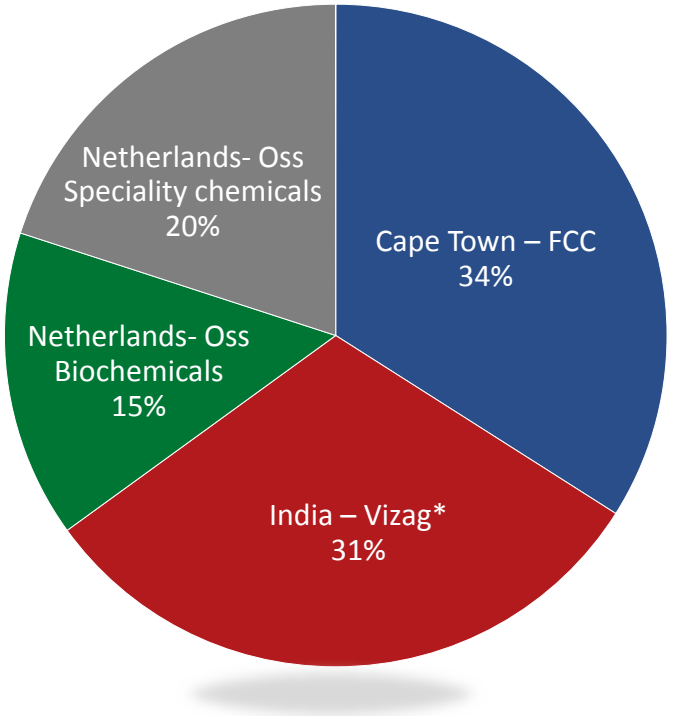
Manufacturing | API capacity & capability

Total Capacity 200 KvH

Capabilities
Anaesthetics
Muscle relaxants
Narcotics
Analgesics
Antipsychotics
Antineoplastics
Bronchodilators

FY 2013

FY 2017



Total Capacity 980 KvH

Added Capabilities
High Potency & Cytotoxics
Steroids/Alkaloids/Heterocyclics
Conjugated & Esterified estrogens
Peptides
Hormonal & General intermediates
Biochemicals – Heparin & Danaparoid Gonadotropins

NDB:

- Purification of Fondaparinux
- Conversion of heparin to Nadroparin

- Five fold capacity increase
- Enhanced capabilities
- Broader geographic diversity

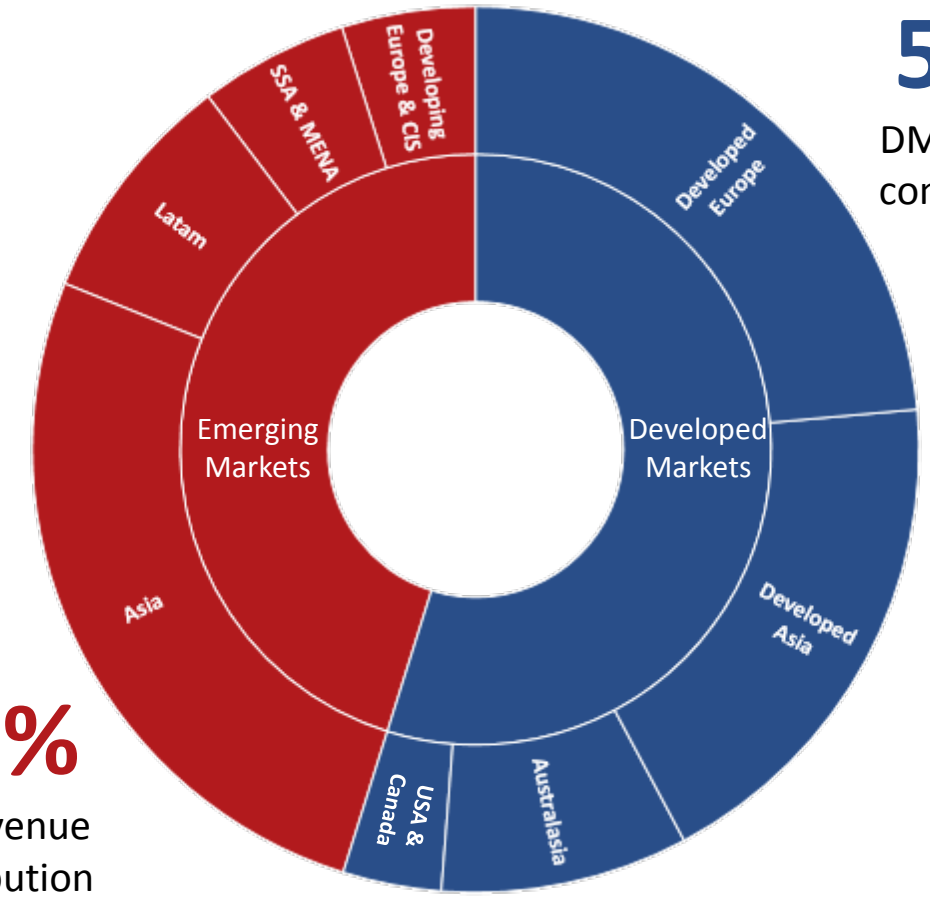
*Intermediate manufacturing

Anaesthetic Brands

R' million	FY 2017	FY 2016 (CER)	% change
Developed Markets	3 885	7	>100%
Emerging Markets	3 180	107	>100%
Total Revenue	**7 065**	**114**	**>100%**

- Largest sector of therapeutic focused brands
- Broad portfolio
  - No.1 globally (ex-USA)
  - Local, general and topical
  - AZ & GSK products included for ten and four months respectively

Regional representation



55%

DM revenue contribution

45%

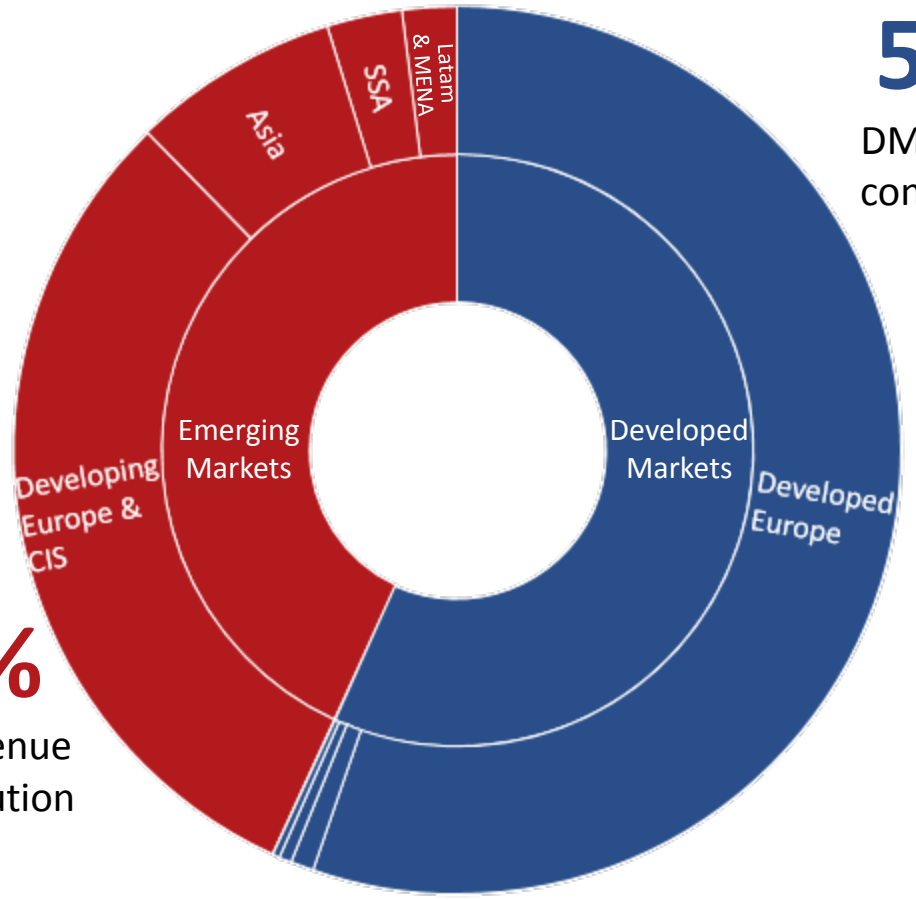
EM revenue contribution

Thrombosis Brands

R 'million	FY 2017	FY 2016 (CER)	% change
Developed Markets	3 255	3 861	(16%)
Emerging Markets	2 410	2 128	13%
Total Revenue	**5 665**	**5 989**	**(5%)**

- Thrombosis sales down ↓ R324 million
  - Developed Europe down R605 million
- EMs providing positive offset

Regional representation



57%
DM revenue contribution

43%
EM revenue contribution

Developed Asia, Australasia & North America

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THANK YOU