

Life Science - a sustainable platform for profitable growth

2012 Life Science Information Day

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Merck KGaA
Darmstadt · Germany



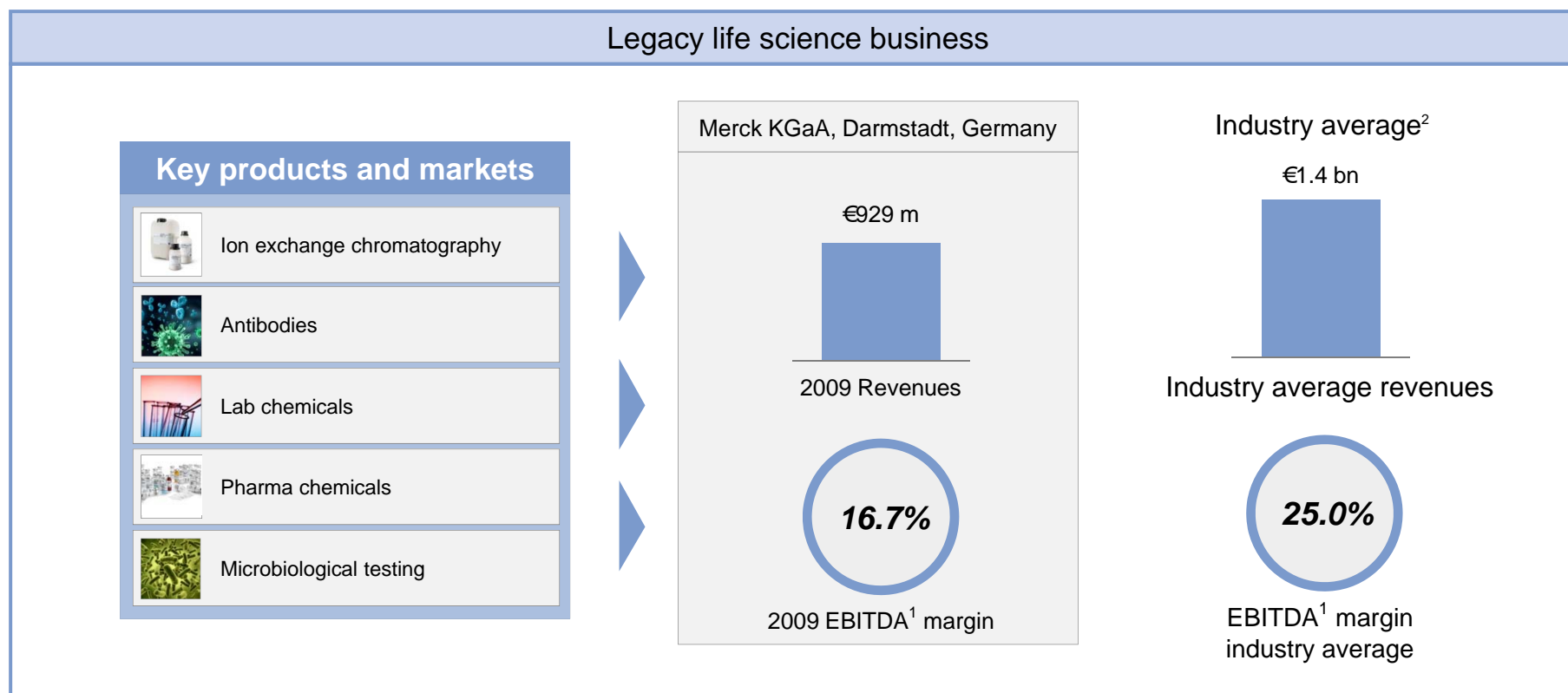
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Agenda

- **Creation of a global leader**
- Industry, end markets and business model
- Outlook

In 2009, we owned a sub-scale life science business lagging peers' size and profitability

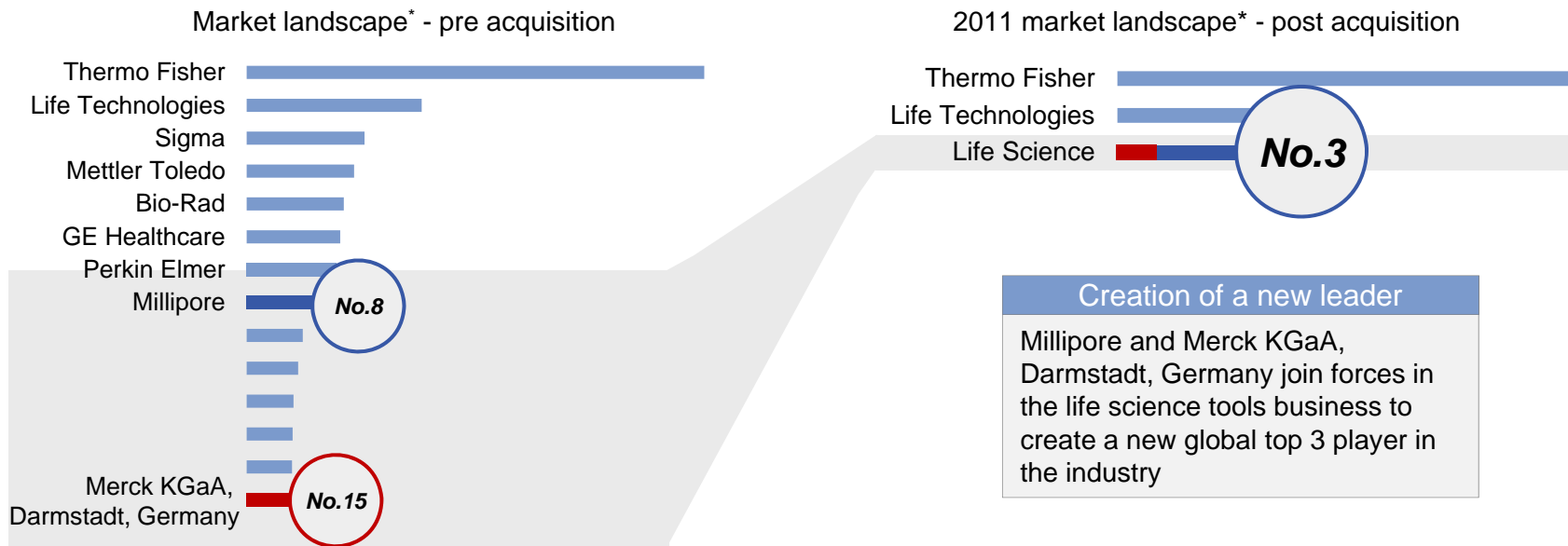


¹pre one-time items

²Source: capital market research, includes top 20 tools companies excluding Thermo Fisher, average as of FY 2009

We built a leadership position in the life science tools industry by acquiring Millipore

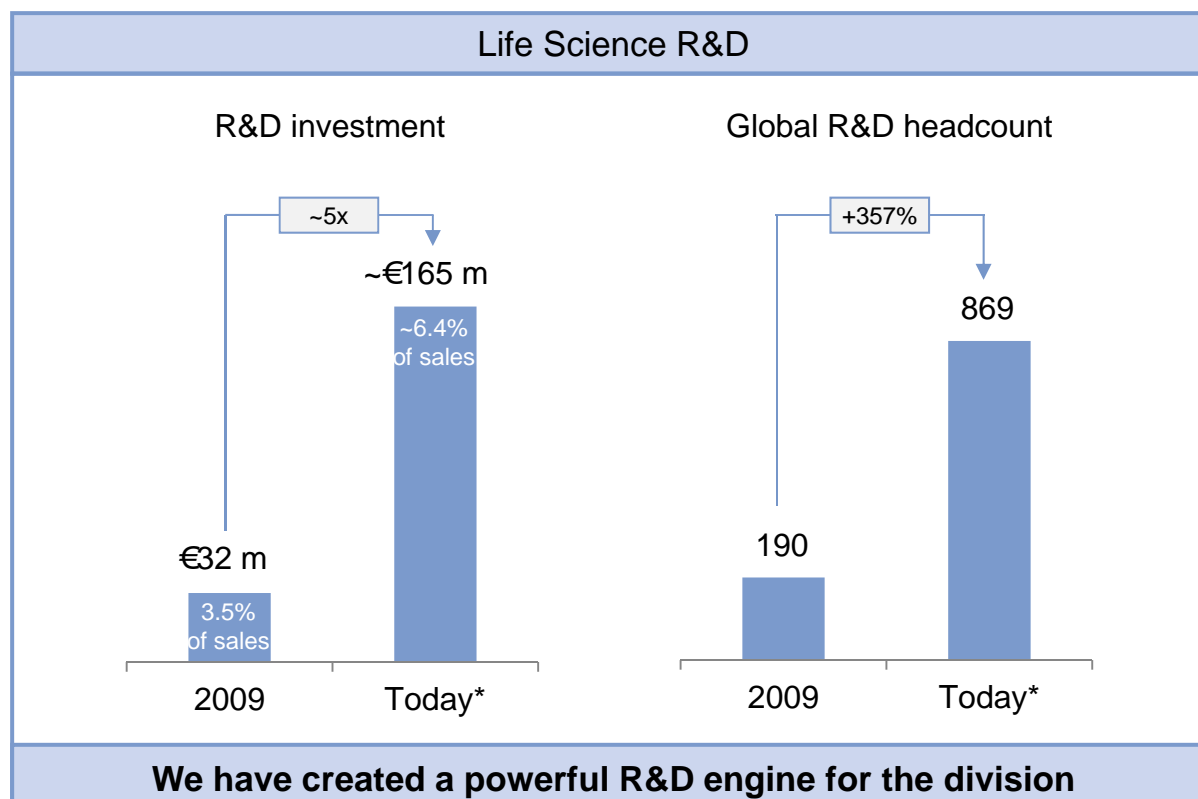
Millipore acquisition moved us from #15 to #3 in the life science tools industry



Creation of a leading growth platform with top 3 global market position

*Ranked by sales to lab and drug production customers in comparable markets, excludes diagnostic sales
Source: Capital market research, company estimates

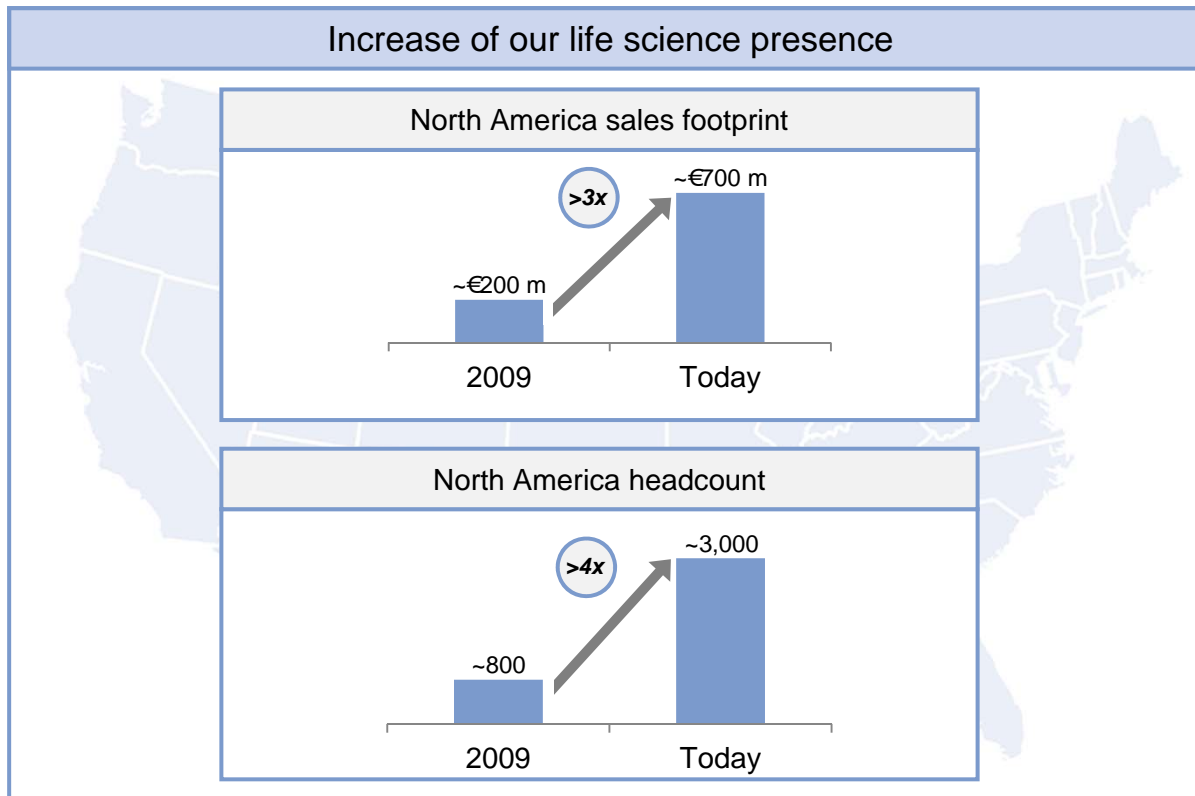
Our industry is driven by innovation - we now have the resources to expand our position



- Innovation**
- Life science tools is a technology-driven industry where innovation is critical
 - Legacy Group business lacked scale and resources to sustain competitive R&D engine
 - We now have the scale and an overall level of investment to build and expand on our leadership positions

*2012E

Acquisition of Millipore transformed presence and capabilities in the United States...

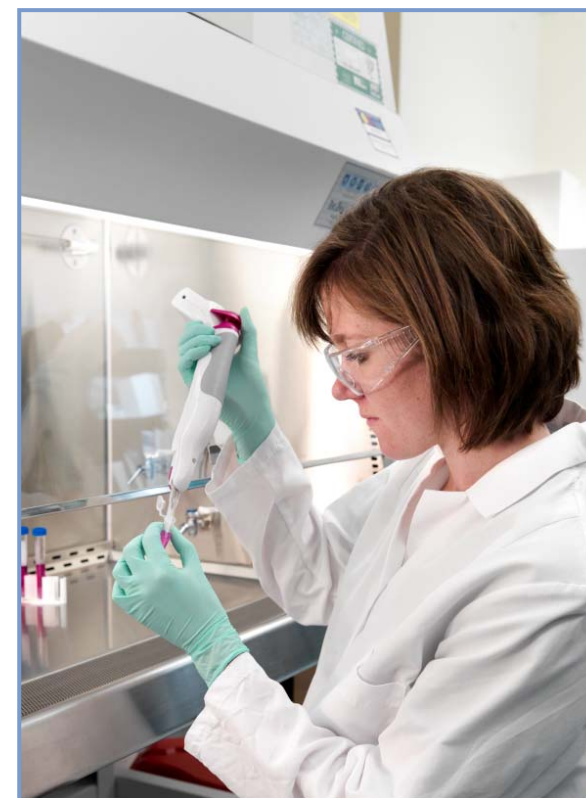
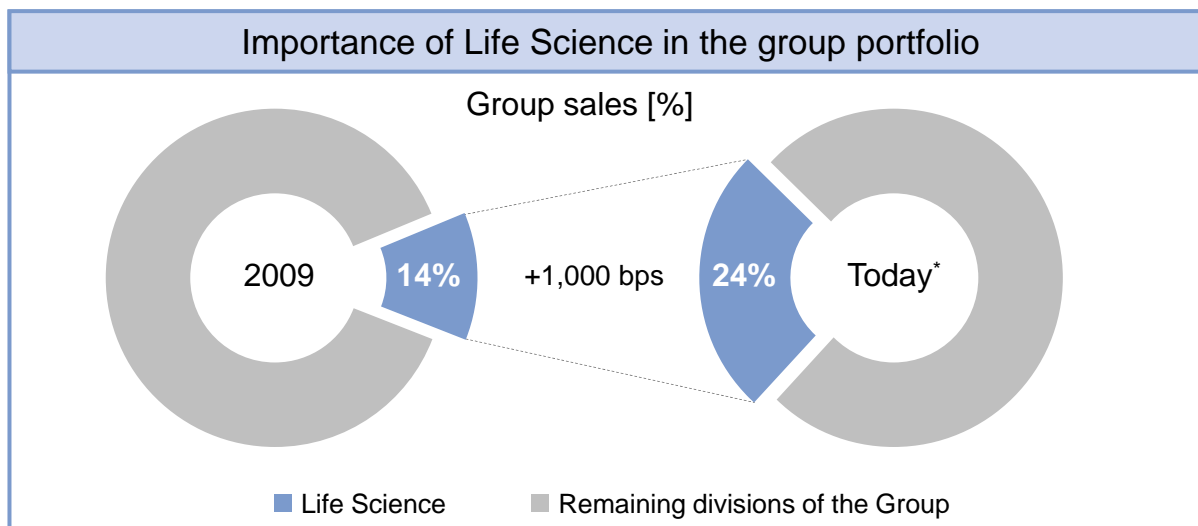


US strength

- United States is a critical market in life science tools Industry
- Largest market and customer base
- Access to industry thought leaders
- Access to key talent

Transformation of market position in the United States

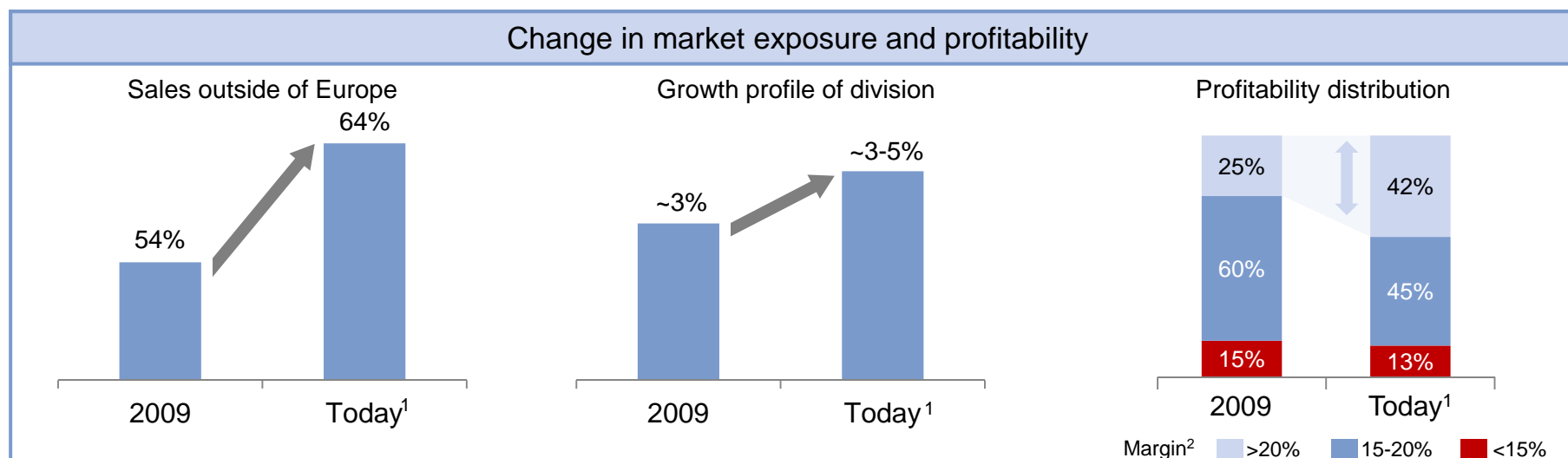
...and catapulted the life science business into the Group's second largest division



Life Science has grown in importance to the Group's overall performance

*2012E

We now have leadership positions that have elevated our global growth and profitability



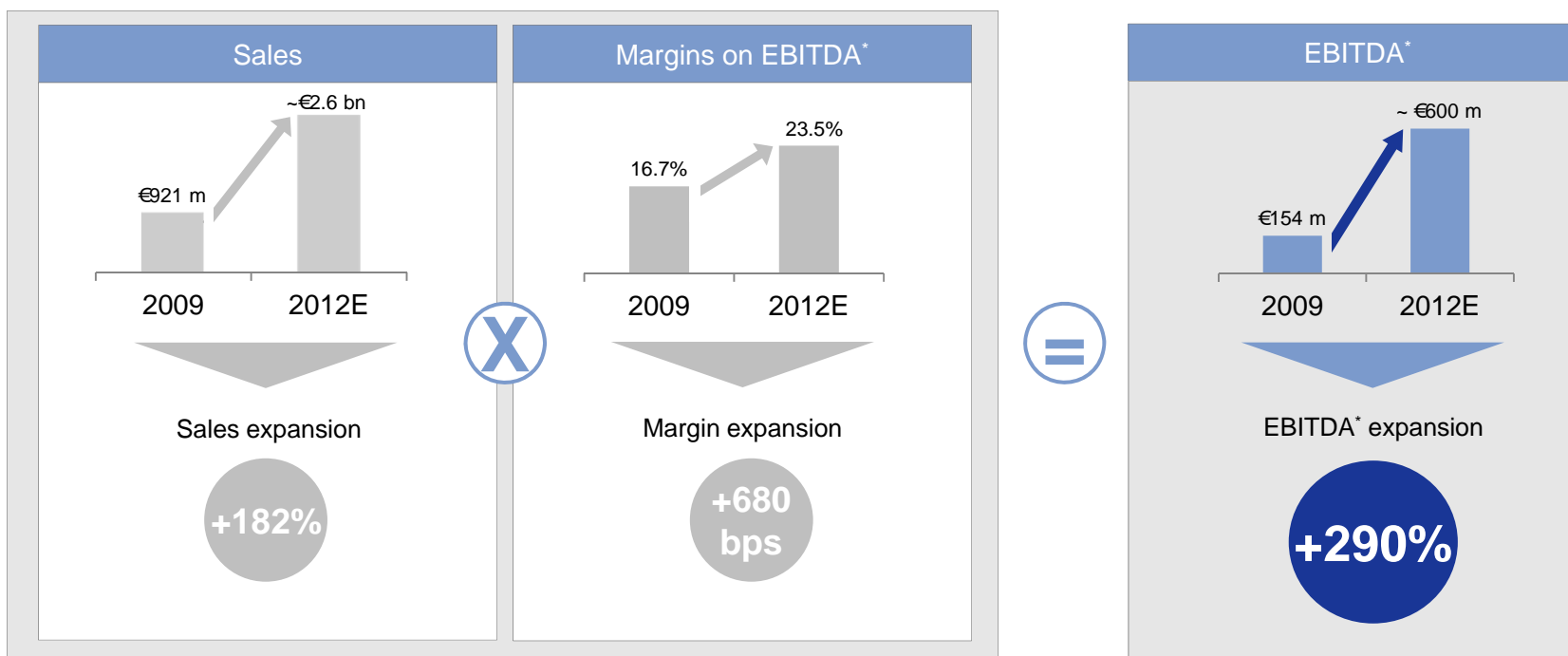
- Life Science leadership positions - #1 or #2**
- Filtration
 - Lab water
 - Biomonitoring
 - Single-use manufacturing
 - Sample preparation
 - Benchtop flow cytometry
 - Lab chemicals and analytical reagents
 - Process-scale chromatography
 - Pharmaceutical chemicals

¹2012E

²EBIT pre one-time items as % of sales

The transformation of the division can be seen in its higher sales and profit margins

Substantial expansion of both sales and margins drives higher EBITDA*

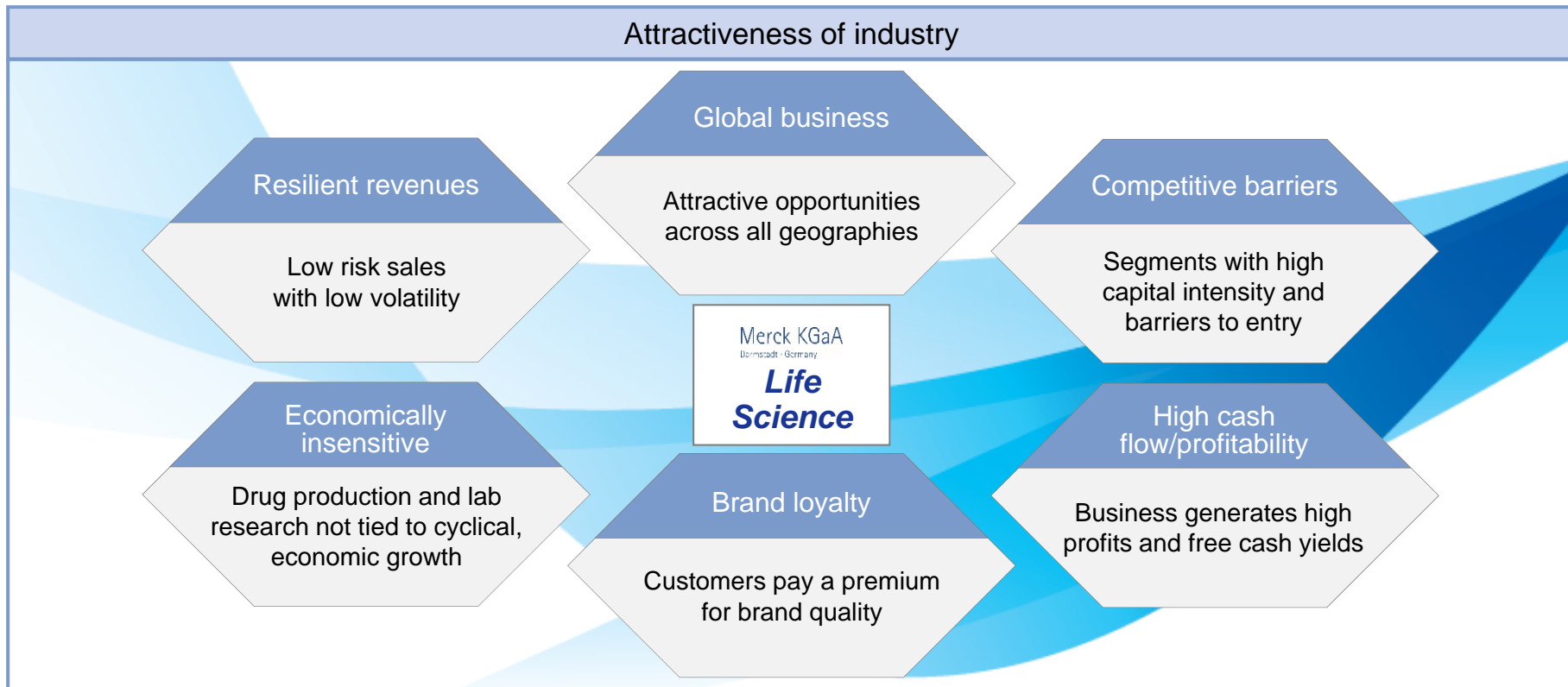


*adjusted for one-time items

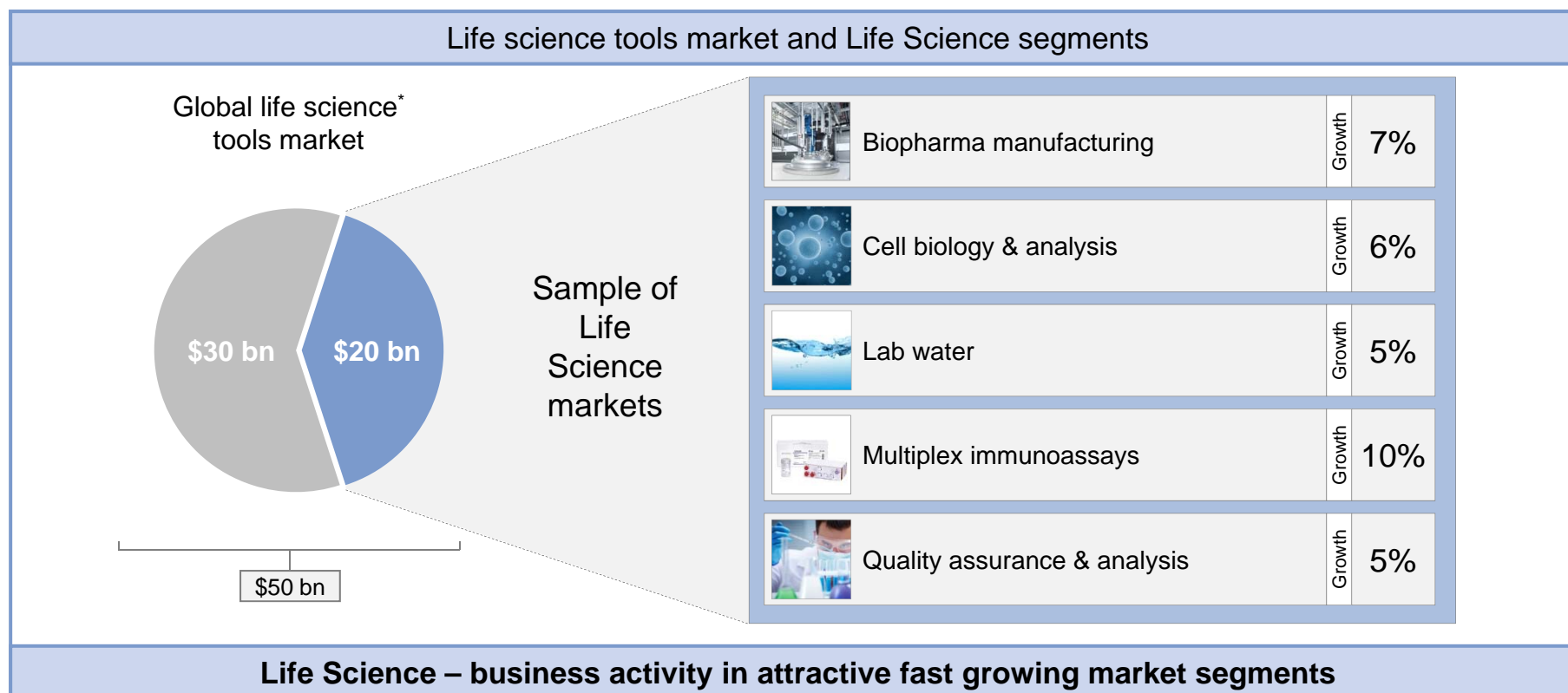
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Life science is an attractive industry

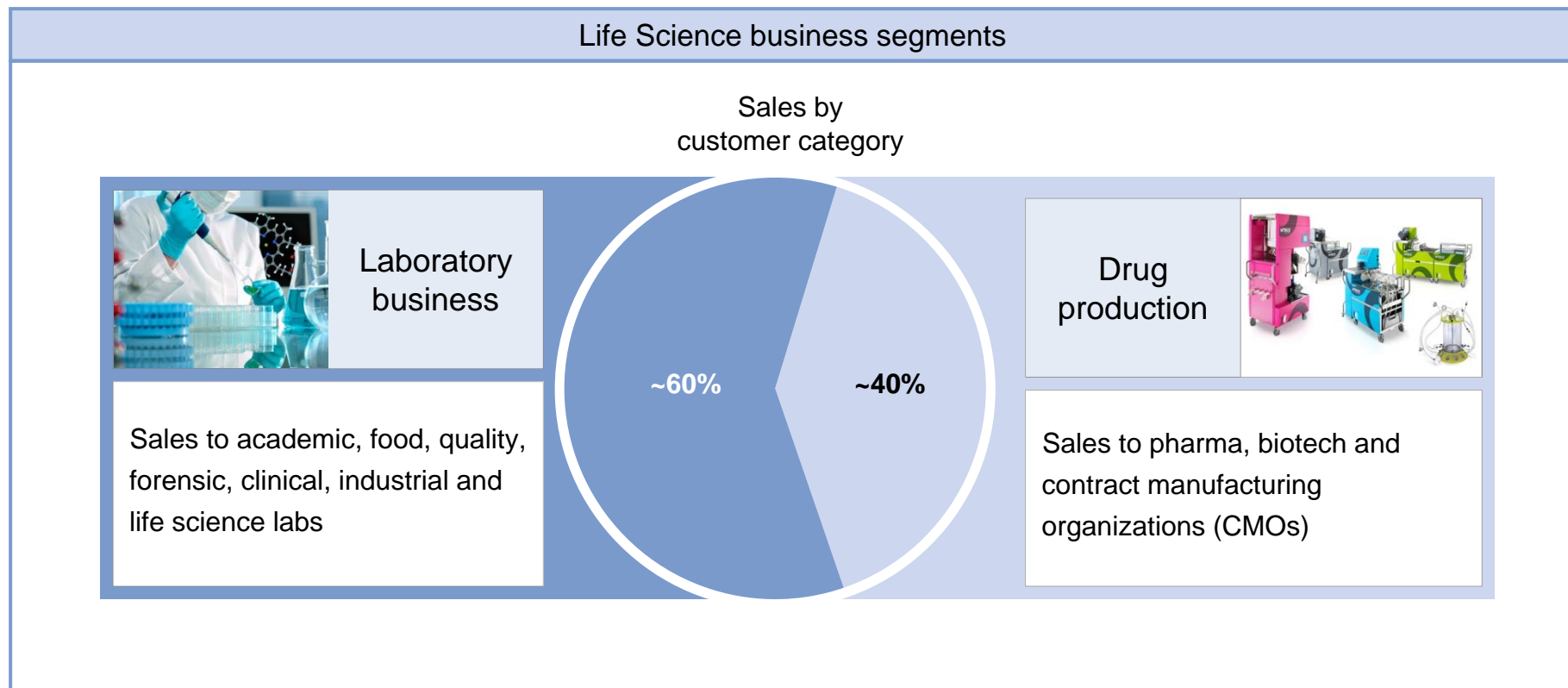


We target some of the fastest growing segments of a huge global market

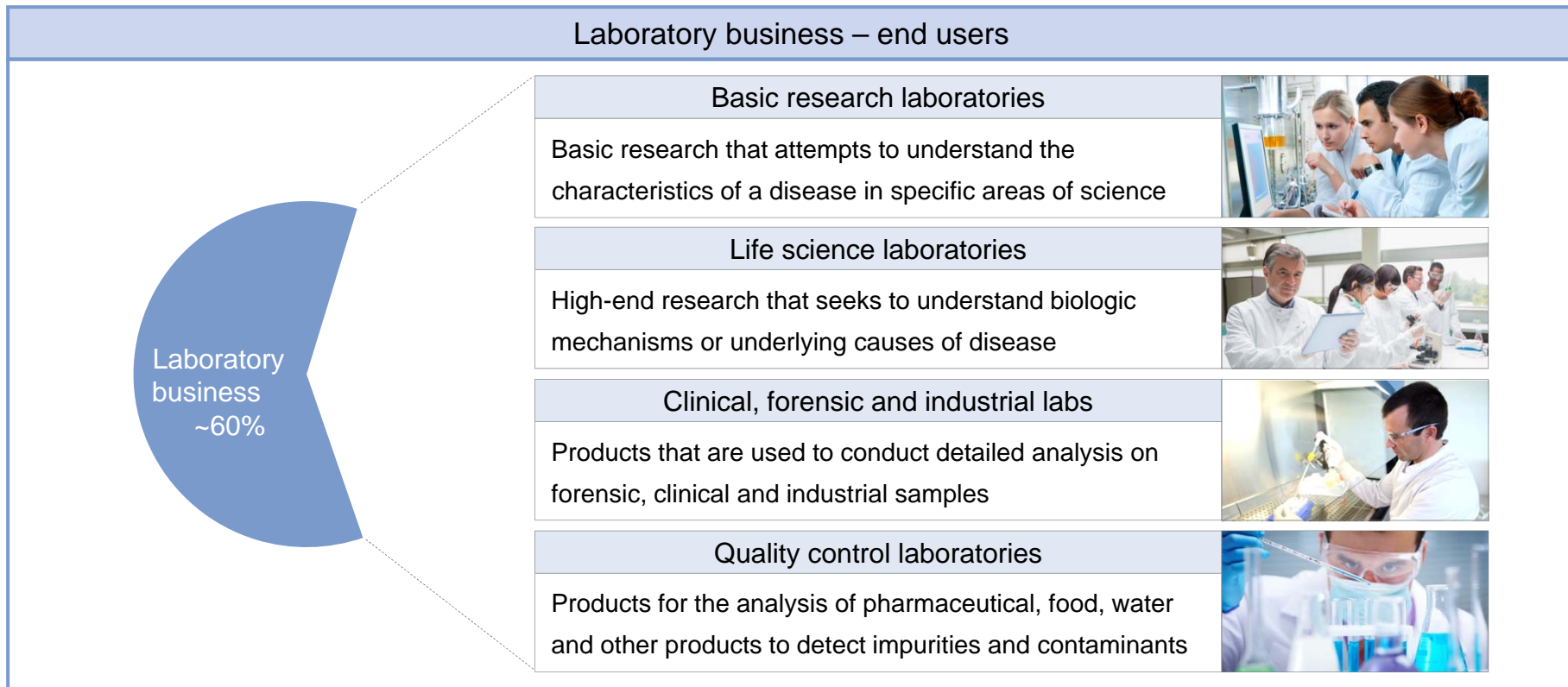


*Source: Bank of America, company estimates, 2011

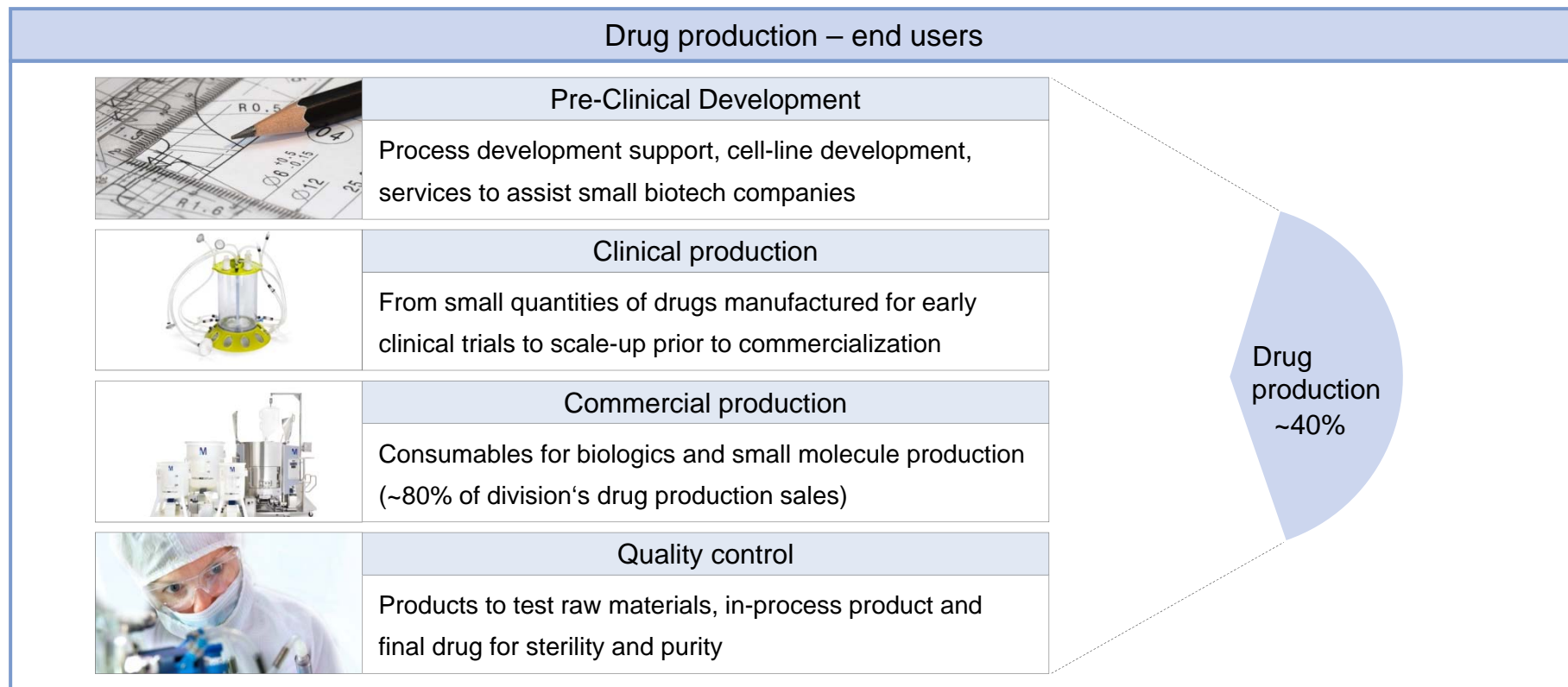
Life Science's business can be simplified into two key customer segments





Our lab business is focused on the following types of activities



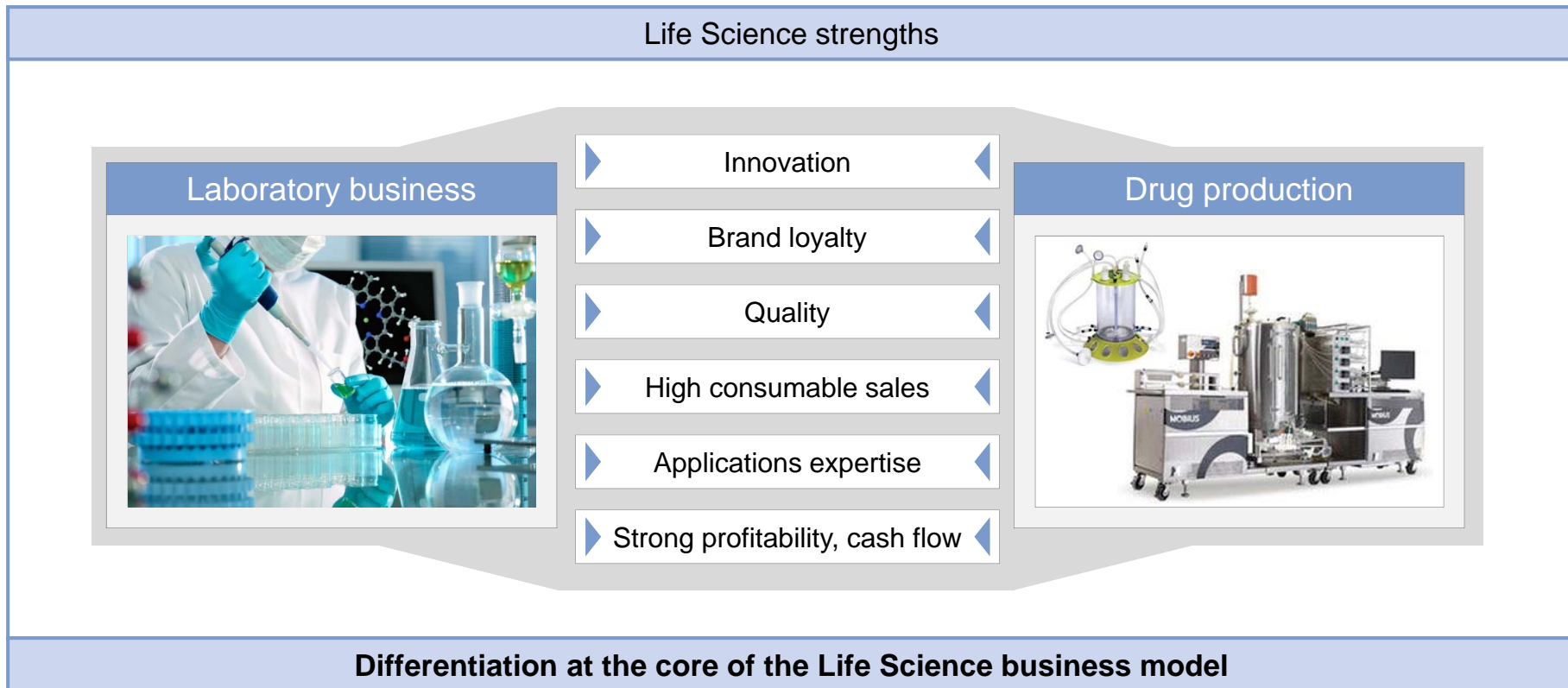
Our drug production business is primarily driven by drugs already on the market



Each of these customer segments require distinct business models...

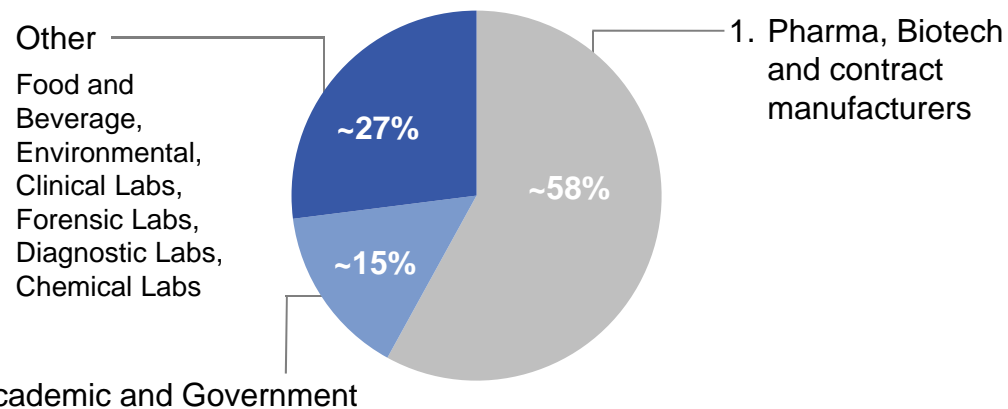
Life Science business segments					
	Customers	Product lifecycles	average order size	Market landscape	Competitors/ Peers
Laboratory business 	~ 200,000	~3 - 5 years	~€1,000	Large competitive universe, few head-to-head competitors	Bio-Rad, Life Technologies, Sigma, Thermo Fisher, hundreds of small, niche companies
Drug production 	Top 50 represent 50% of sales	>15 years	~€200,000	Few competitors: high capital intensity and barriers to entry	Pall (USA), Satorius-Stedim (GER), GE Healthcare – (UK)

...but share a common set of strengths



Overall, a resilient customer base with low exposure to academia and government

Life Science sales by customer segment








comments

- Overall, low exposure to academia and government customers
- Pharma and biotech business primarily tied to drug volumes, which are projected to expand significantly
- Sales from “other” category are highly stable and not linked to R&D budgets

Diverse customer base provides stability through the macroeconomic cycle

The diversification of our business is what makes it so strong and attractive

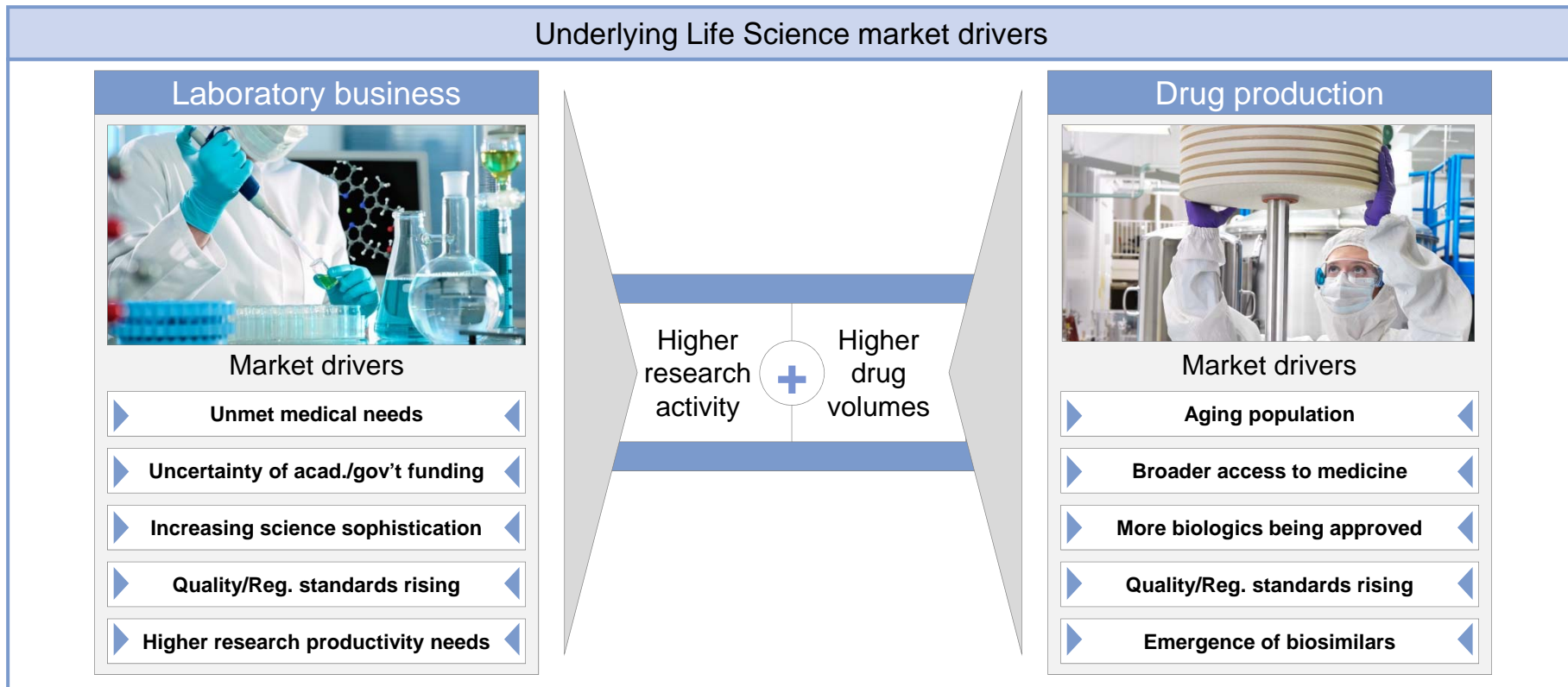
Customer diversification	~200,000 customers	
Product diversification	~50,000 products, few products with more than €10 m in annual sales	
Geographic diversification	Balanced sales distribution between Europe, North America and Asia	
Industry risk diversification	Drug production: risk spread across large number of drugs and diseases	
Order diversification	Lab business: thousands of orders, average order size around €1,000	



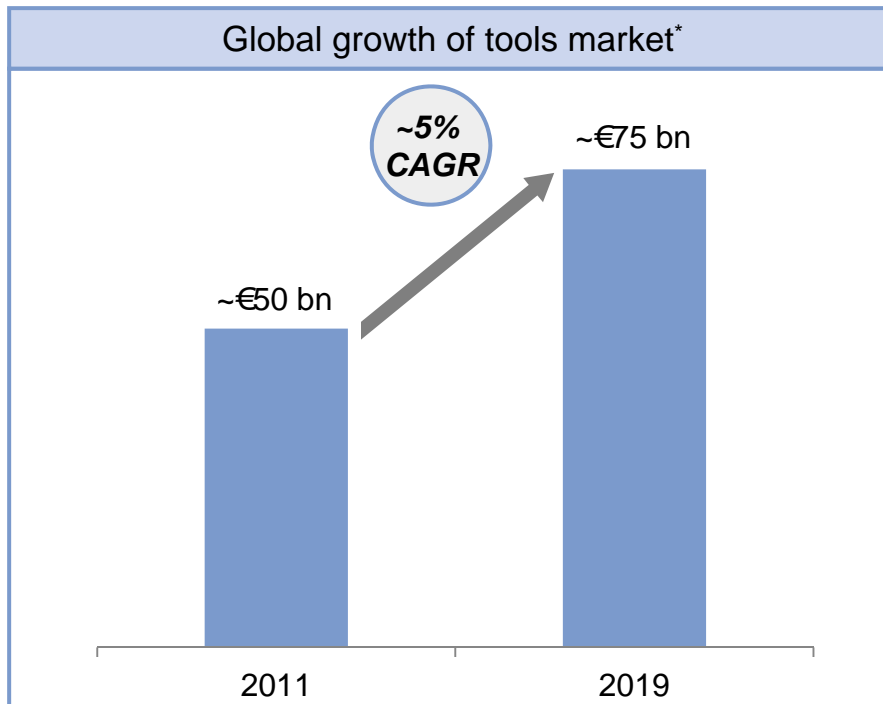
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We will benefit from strong long-term growth drivers...



...which will establish a thriving market for life science tools providers

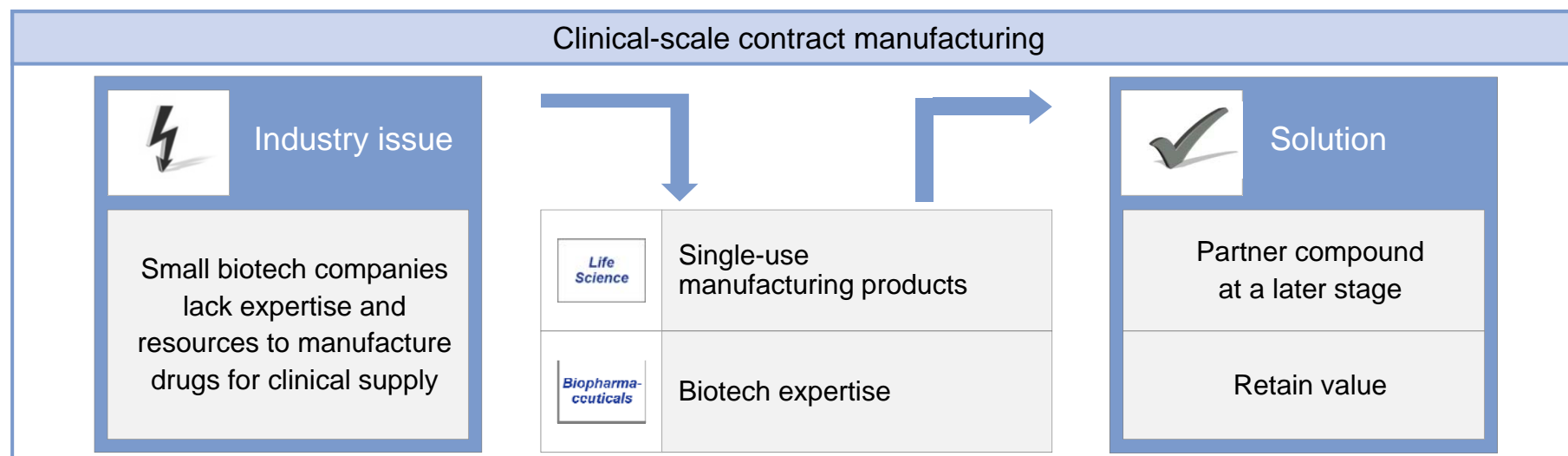


- Market characteristics
- Differentiated innovation is rewarded with higher margins
 - Rising quality standards benefit premium providers like Life Science
 - New market segments develop: stem cell, biosimilars, single-use, etc.


Healthy long-term market dynamics with emergence of new business models

*Source: Bank of America

Leverage biotech manufacturing expertise, developing new solutions for small biotech

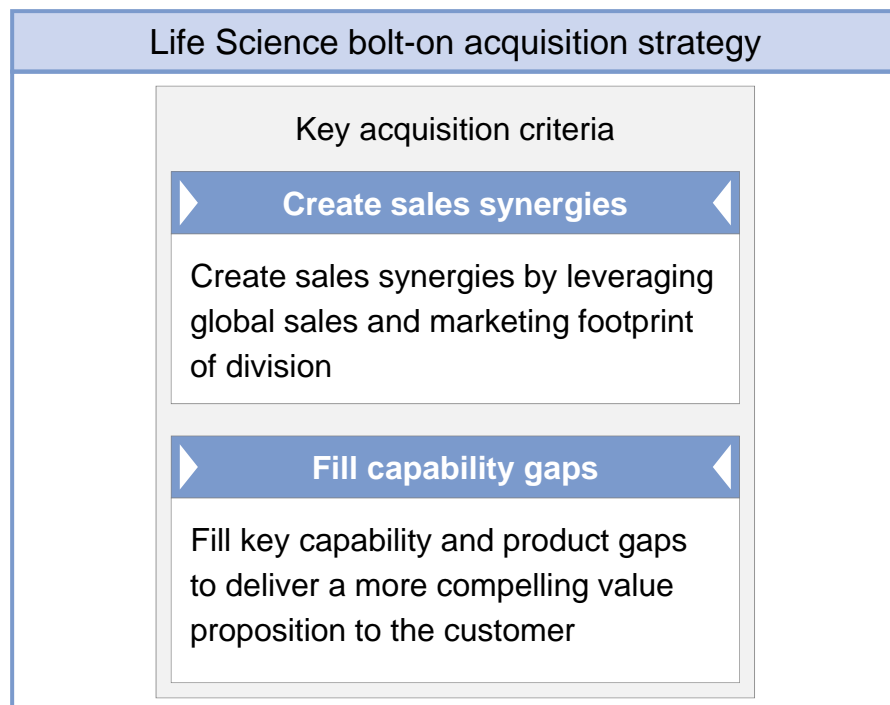


Life Science Biodevelopment Center



- Located in Martillac, France
- Fully single-use GMP production facility
- Currently working with ~20 biotech customers

We will continue to leverage bolt-on transactions to augment R&D activities



Recent deals

		Leverage sales force	Capability gap filled	Area of expertise
Drug production	Skywing	✓	✓	Cell culture media
	Biochrom	✓	✓	Cell culture media
Laboratory business	Amnis	✓	✓	3-D cell imaging
	Heipha Hycon	✓	✓	Microbial testing

Purchase attractive businesses and leverage global sales and marketing capabilities

Life Science – a leader in one of the most attractive segments of the healthcare market

Industry attractiveness	We serve a stable, attractive industry that will generate solid growth
Leadership position	We have transformed the division into a clear market leader
Low risk to future cash flows	High recurring sales and profitability ensure strong cash flows even during economic or industry downturns



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