

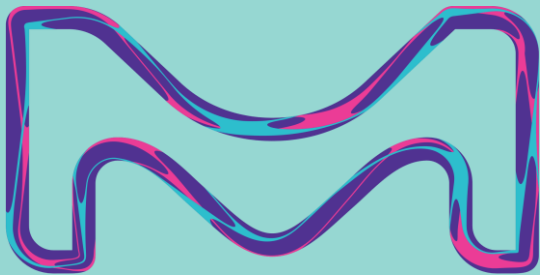
Merck KGaA, Darmstadt,
Germany

Q3 22 Roadshow

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November 11, 2022



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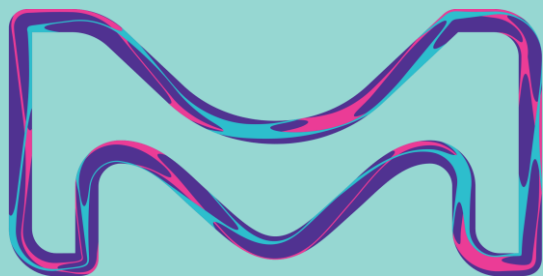


Agenda

- 01** Business overview
- 02** Transforming the company
- 03** Life Science – Rising to new heights
- 04** Healthcare – Focused leadership driving long-term growth
- 05** Electronics – Leveraging portfolio shift
- 06** Sustainability
- 07** Guidance & executive summary



BUSINESS OVERVIEW



Group

Three innovative sectors serving patient and customer needs



Life Science

Diversified industry leader

Process Solutions

Leading product portfolio for bioprocessing, novel templates, chemicals, and formulation materials serving biopharma customers

Life Science Services

Leading contract testing organization and emerging CDMO offering focused end-to-end services across multiple modalities

Science and Lab Solutions

One of the industry's broadest portfolios of consumables for R&D and testing across diverse, attractive customer segments



Healthcare

Global specialty innovator

Oncology

Focused leadership in SCCHN, mUC and mCRC. R&D focus on xevinapant in Ph3, DNA damage response and ADCs

Neurology & Immunology

High-efficacy and platform therapies in MS, potentially first-in-class BTKi treatment in Ph3. Advancing innovation in SLE, CLE, gMG

Fertility

Broad portfolio of treatment options, devices and advanced fertility technologies

CM&E *Cardiovascular, Metabolism & Endocrinology*
>90m patients using our medicines for diabetes, thyroid, cardiovascular diseases



Electronics

Leading player

Semiconductor Solutions

Integrated innovation leader with one of the strongest portfolios of materials and related equipment and services.

Supplying every player in the semi industry. Helping customers create NextGen, faster, smaller and more energy-efficient devices.

Display Solutions

Innovative materials for light switching and modulation as well as for new technologies such as augmented & virtual reality

Surface Solutions

Pigments and active ingredients for automotive, cosmetic & industrial markets

Share of net sales ¹	46%	36%	18%
Share EBITDA pre ¹	50%	33%	17%

¹Based on FY21 Group EBITDA pre excluding Corporate&Others

5 Acronyms: SCCHN=Squamous Cell Carcinoma of Head and Neck; mUC=metastatic Urothelial Carcinoma; mCRC=metastatic Colorectal Cancer; ADC=Antibody-Drug Conjugates; Ph3=Phase 3; MS=Multiple Sclerosis; BTKi=Bruton Tyrosine Kinase inhibitors; SLE=Systemic Lupus Erythematosus; CLE=Cutaneous Lupus Erythematosus; gMG=generalized Myasthenia Gravis



Group

What sets Company apart - insights into the Strategic Framework

I. Foundation

Strongly resilient and diversified business model. The foundation is key for our strategy with strong cash generation



New Strategic Framework introduced at CMD'21

II. Direction

Efficient growth of BIG3, further leveraged by M&A

III. Our DNA

Long-term focus driving innovation power. Reinforced by significant sustainability effort

Group

Holistic approach to resilience - backbone for sustainable growth



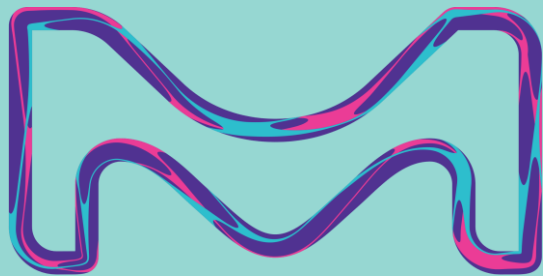
In-depth analysis across all Enterprise Units revealed Group as **strongly resilient**, building on a solid foundation

	Leading ¹	Strong ²	Foundational ³	Lagging behind ⁴
<i>Peer group specific</i>	Strong balance sheet and sufficient cash reserves	✓		
	Low business cyclicality		✓	
	Lower fixed cost exposure		✓	
	Diversified customer allocation		✓	
	Supply chain operations			✓
	Diversified manufacturing		✓	
<i>Holistic</i>	Demand robustness in economic downturn scenario	✓		
	Inflation adaptability		✓	
	High entry barriers	✓		

¹Leading= Areas where industry-leading capabilities and practices are demonstrated; ²Strong = Advanced institutional capabilities and quality assured by effective practices consistently displayed; ³Foundational = Fundamental capabilities and practices in place with repeatable processes and outcomes; ⁴Lagging behind = Significant gaps in capabilities and/or systematic and effective practices, high dependency on individuals



TRANSFORMING the company

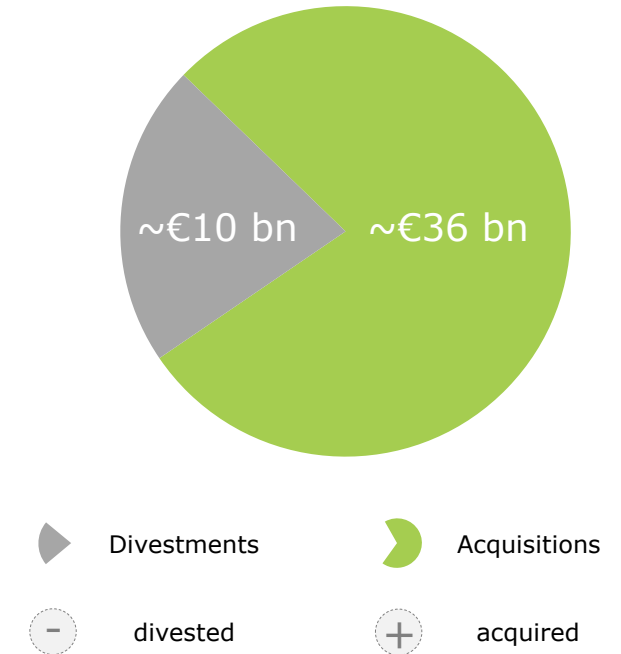
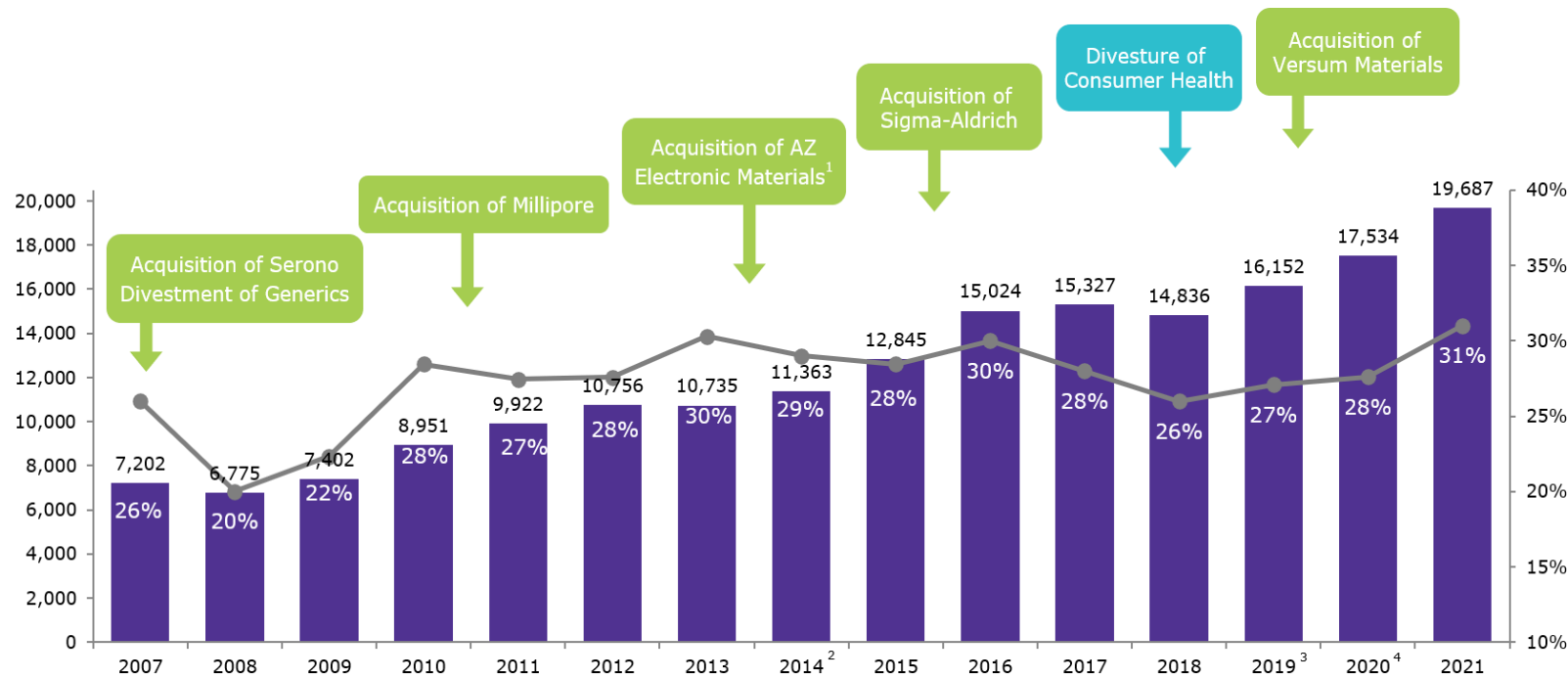


Group

Added scale and strengthened attractiveness of portfolio

Growth trajectory

Transformation volume⁵

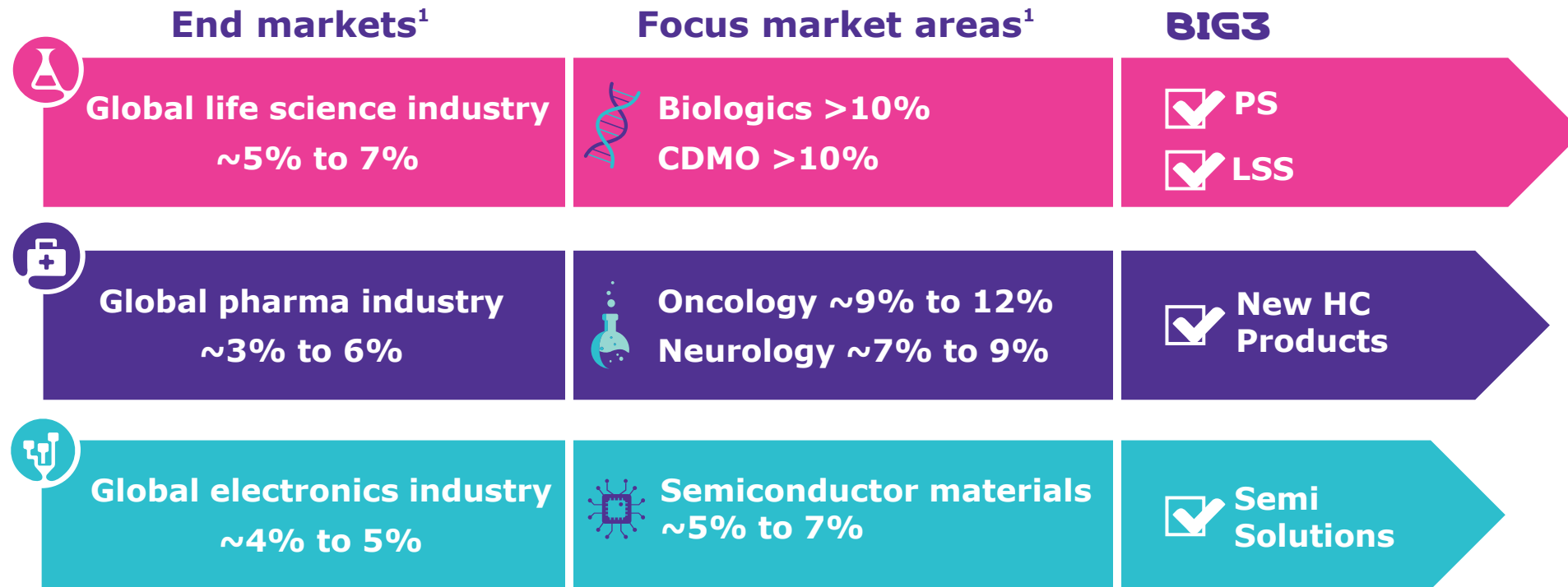


¹Included since 2 May 2014; ²2007 and 2014 EBITDA pre margin adjusted for comparability; ³2018 net sales reflect Consumer Health divestiture (reduction of ~€1 bn net sales p.a.)
⁴2020 margin restated for €365 m patent litigation provision release; ⁵ 2007 - 2020



Group

Uniquely positioned portfolio in fast-growing markets



Mid-term growth rates



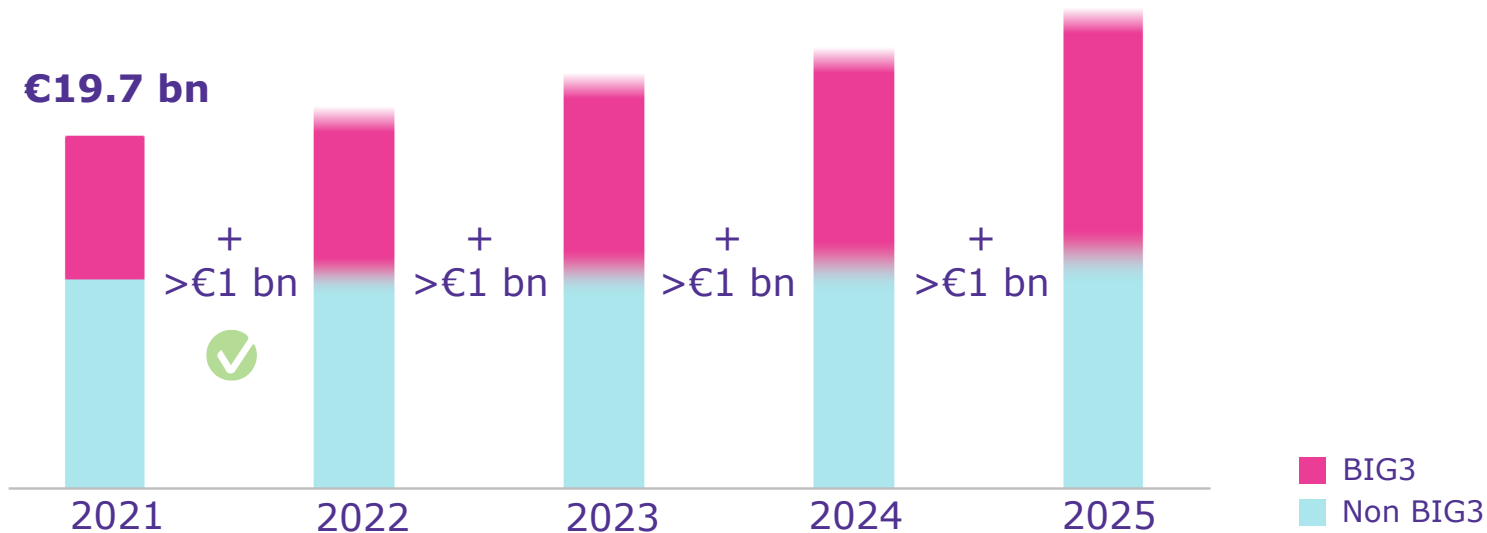
Sustainable growth: building on distinct megatrends, diversification and low volatility

¹⁰ ¹Company estimates of mid-term growth outlook based on industry forecasts and reports from public research institutes (e.g. IMF, IQVIA, Evaluate Pharma/EphMRA, Prismark, etc.)



Group Delivering an even more robust #25by25

BIG3 to contribute to >50% of sales in 2025



illustration

- ✓ **M&A excluded**
- ✓ **Sales growth organic**
>€1 bn per annum
- ✓ **BIG3**
~80% of growth
- ✓ **CAGR organic**
>6% mid term

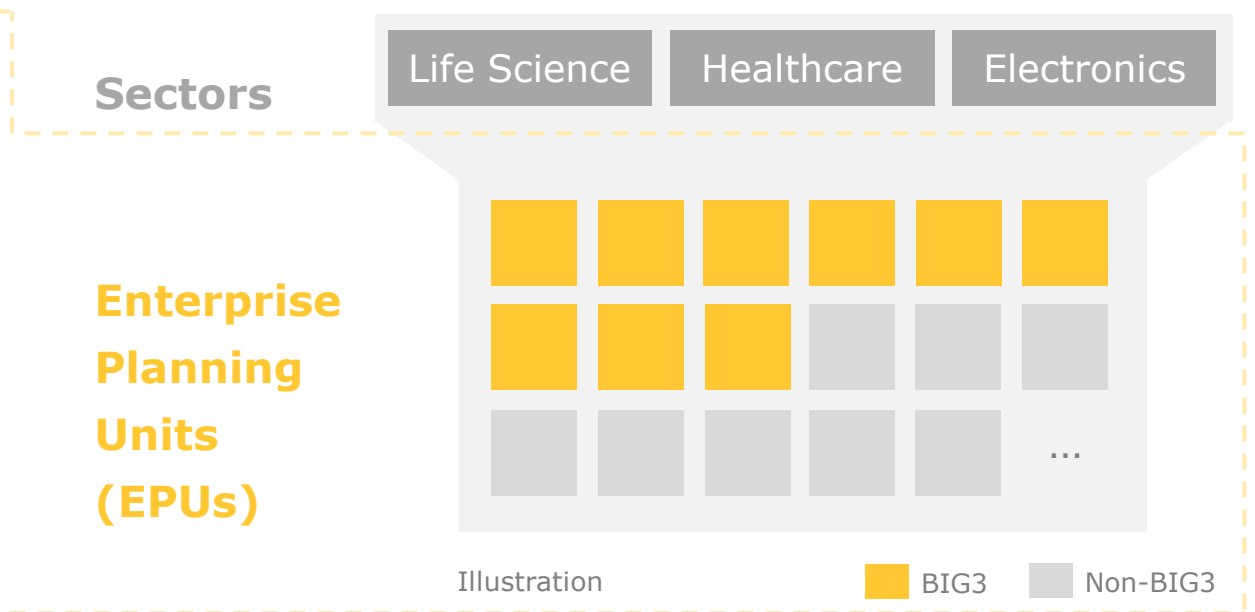
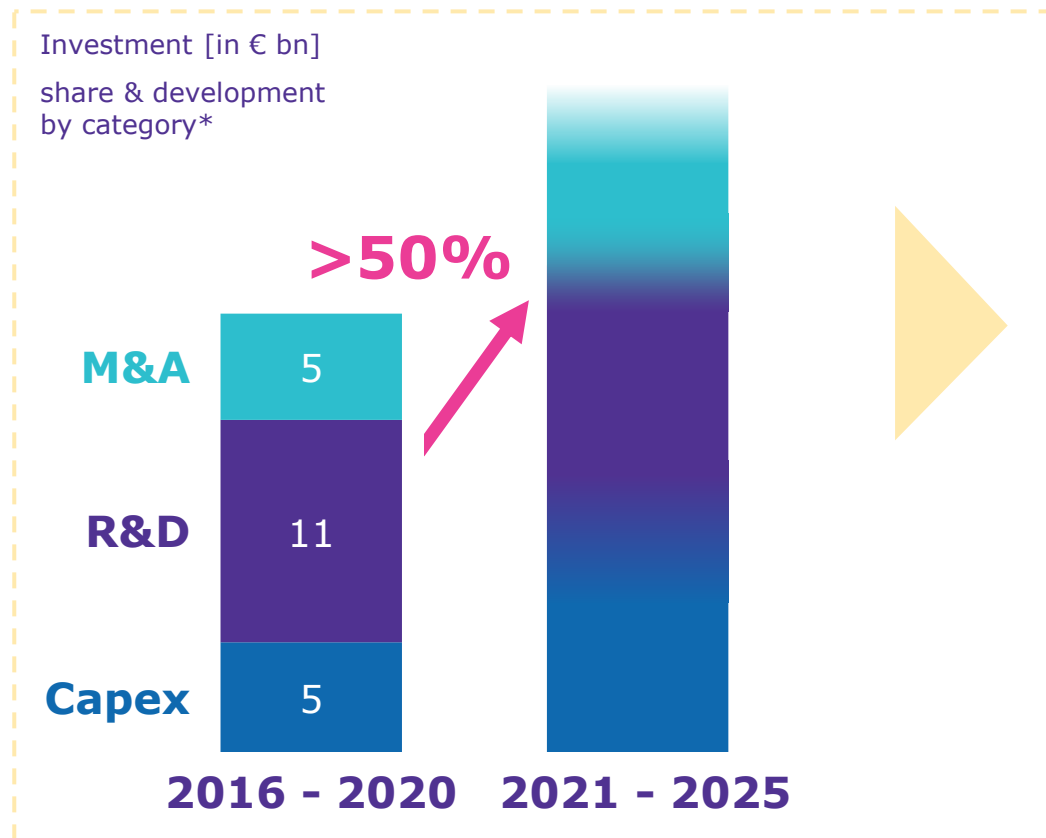
■ BIG3
■ Non BIG3

Group

Committing to record investments - targeted @BIG3 growth engines

Leading positions in **growth markets** fuel significant **boost in investment capacity**

Targeted, disciplined & focused capital allocation across **>20 enterprise planning units**



BIG3 consist of **~10 planning units** with a **capital allocation target of >70%** between 2021 and 2025

* future M&A purely illustrative as it is deal-dependent



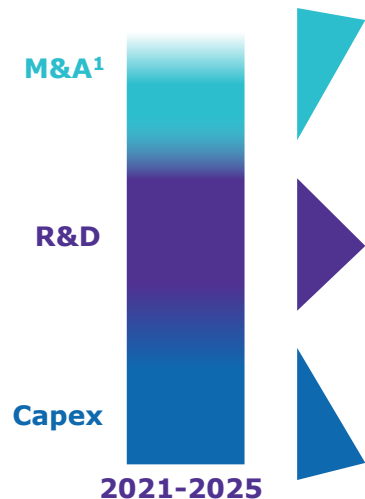
Group

Financial flexibility fueling investment capacity

Accelerated deleveraging to <2x net debt to EBITDA pre ratio enables **unprecedented financial flexibility**

>50% higher investment*
with BIG3 capital allocation target of >70%

Investment € bn share illustration



* future M&A purely illustrative as it is deal-dependent

¹ M&A: Mergers and Acquisitions

Abundant growth opportunities make **strategic capital allocation** more important than ever

M&A

- **Strong operating cash flow & increased debt capacity**
- **High single-digit C bn financial flexibility by end of 2022**
- Continued higher likelihood of **bolt-on** vs. large transformational deals

R&D

Clear focus on **innovation** & further development of **pipeline productivity**

- **Life Science:** accelerating targeted R&D scale-up to capture trends & strengthen portfolio
- **Electronics:** continuous alignment with customer technology roadmaps incl. new R&D labs
- **Healthcare:** driving "R&D productivity" to benchmark levels with focused leadership

CAPEX

More **complex & multifaceted** CAPEX decisions requiring **discipline**

Rich growth opportunities driven by demand step changes, e.g.

- Process Solutions **capacity & network expansion**, targeted scaling of **high value CDMO/CTO services** across traditional & novel modalities
- Semi capacity expansion in line with customer demand & smart localization

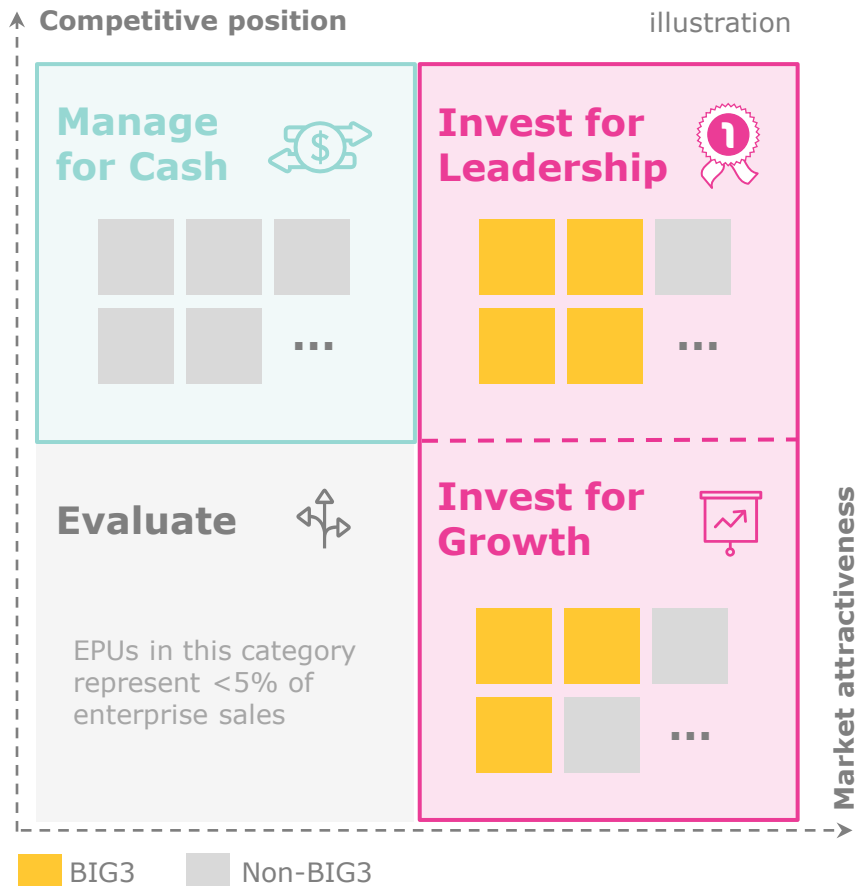
▶ **Annual capex guidance: from ~€1.6 bn in 2022 to ~€2 bn by 2023**

Group

Optimized capital allocation through distinct portfolio roles

Roles determined by **thorough analysis** of **markets** and **competitive positions**

Investment focus on businesses with **greatest strengths** and **attractive opportunities**



- Segmentation in planning units allows **right level of granularity** in market & competitive analysis (vs. sector level or product level)
- **Enterprise Portfolio Units (EPUs) with different roles** drive balance between **strong cash generation** & **targeted capital allocation**

- ✓ **Strong, well-positioned portfolio**
- ✓ Enterprise setup allows **boosted investment capacity and optionality** that would be unattainable to 3 standalone businesses
- ✓ **No need for further diversification** (within or across sectors) or target sector ratios

Group

Diversification of manufacturing footprint strengthened further

Americas

Group sales: €6.4 bn

EMEA

Group sales: €6.3 bn

APAC

Group sales: €7.0 bn

Balance of global and regional focus a key enabler of resilient growth

Major manufacturing sites

- Life Science
- Healthcare
- Electronics
- Recent expansion announcements



Group

Doubling down on M&A to accelerate growth



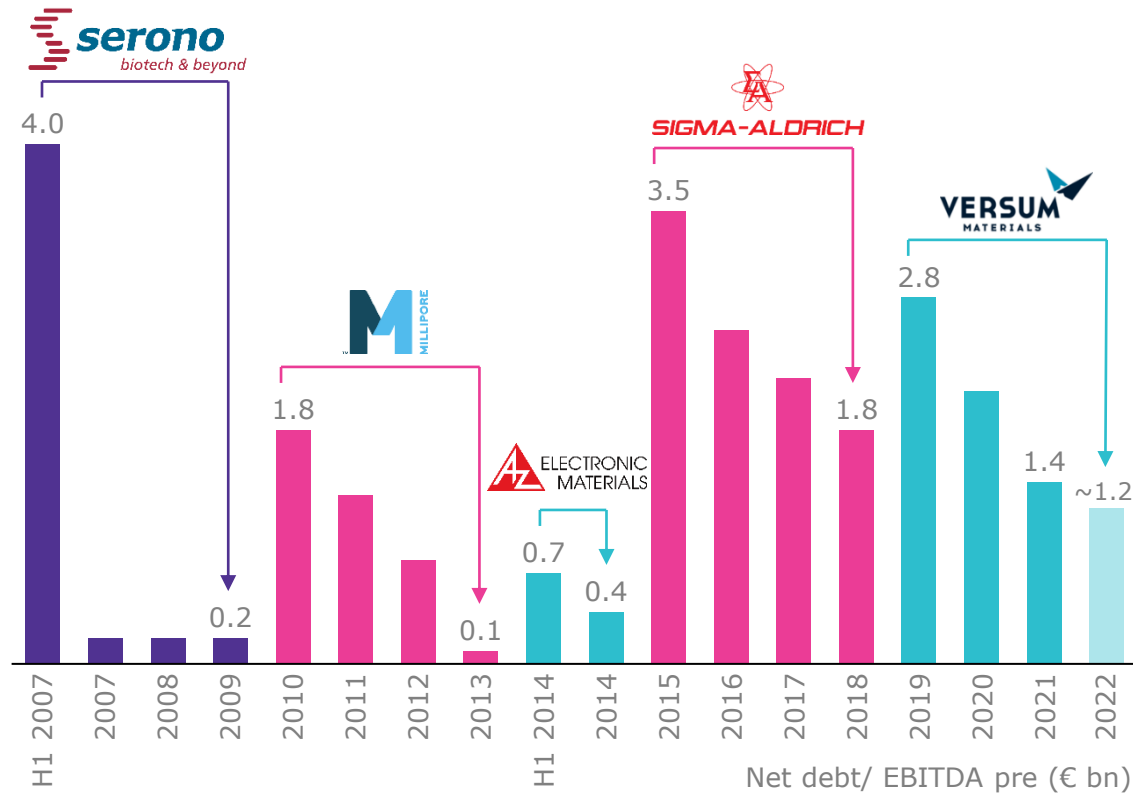
M&A guardrails

- 1 M&A will fit strategic direction of the Group, with BIG3 as high priority
- 2 Approaching financial capacity of around €15 to 20 bn, acknowledging evolving interest rate and macro environment
- 3 Larger scale M&A an option from 2023 onward
- 4 Further bolt-on acquisitions/ in-licensing to continue
- 5 Any acquisition will sync with Group sustainability targets



Group

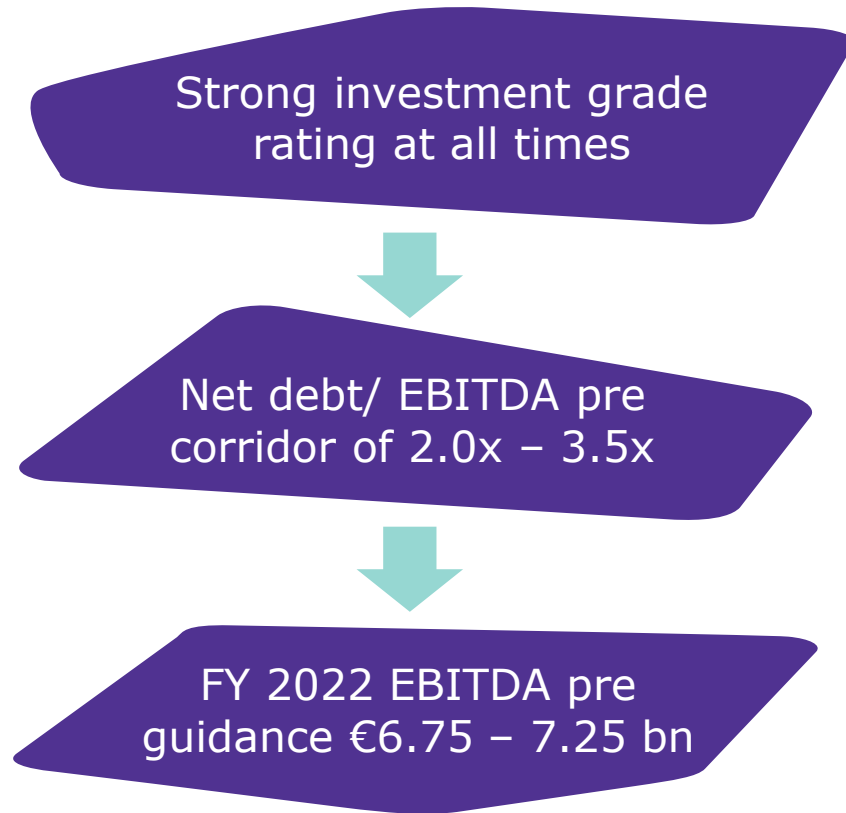
Track record in fast deleveraging enabled by high-quality cash flow



- Resilient sources of cash, especially PS, SLS and Established Portfolio (HC)
- Solid investment grade ratings: Moody's (A3) since 2021, S&P (A) since 2013, Scope Ratings (A-) since 2016
- BIG3 to be further strengthened with CAPEX, R&D and OPEX; financial flexibility is key

Group

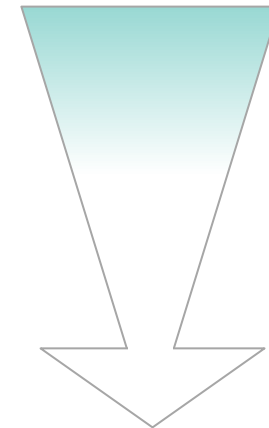
Financial M&A framework: Group has sufficient headroom



Confirming dividend payout ratio of 20% to 25% of EPS pre

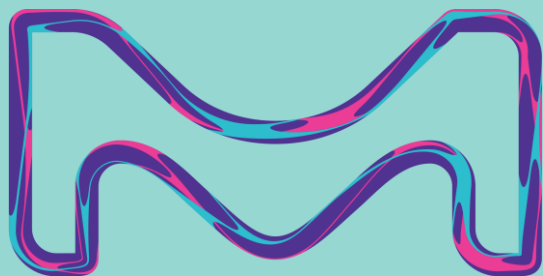
Financing options by priority

- 1 Cash
- 2 Debt
- 3 Hybrid
- 4 Divestments



Life science

Rising to new heights



Life Science - Market

Attractive secular drivers across segments create opportunities

Life Science market¹

2022: ~€200 bn ex COVID, growing 5 to 7%

Portfolio

Customer

Geography

(growth across all dimensions)



Pharma largest (high 1-digit growth)



China fastest (2-digit growth)

Process Products
~€30 bn

9 to 10%



• Rising **mAbs volume** (11%)

• Smaller **batch size** drive single use²

Process Services
~€50 bn

9 to 10%



• Growing **pipeline** (esp. novels, >20%)

• Manufacturing **outsourcing** (CDMO 12%)

Labs
~€120 bn

3 to 5%



• **R&D spend** growing (4%)

• **Discovery** outsourcing (CRO 12%)

- Local **mAb approvals**
- Maturing pipelines weighted towards **novels**
- Strong **R&D** ecosystem, tightening regulations



Developed markets

Large, stable growth (mid 1-digit +)

- Robust fundamental drivers (**Pipeline** growth, emerging **biotech**, increasing **R&D/testing**)

Post pandemic trends:

COVID shift to endemic

mRNA validated

Capacity critical, regional preference



We continuously pursue key growth trends as a leading diversified life science player

¹ Company estimate based on industry forecast over 5-year horizon for the markets we operate in with *all growth rates marked in italic*; ² Common product and service drivers; Acronyms: mAbs = monoclonal Antibodies, mRNA = messenger Ribonucleic Acid, CDMO = Contract Development Manufacturing Organization, CRO = Contract Research Organization



Life Science – Business Sector Overview

New organizational structure provides customer and portfolio focus

Process Solutions (PS)

Best in class technologies for pharmaceutical manufacturing



Upstream & Downstream
cell culture media, Durapore® filters, etc.



Mobius® single-use
bioreactors, prep systems, etc.



Biopharma materials
growth factors, fine chemicals



Formulation
GMP buffers, salts, stabilizers

Life Science Services (LSS)

Focused multimodality contract testing, development, manufacturing (CTDMO)



BioReliance® CTO
biosafety, characterization, release for mAbs and novels



Traditional modalities CDMO
HPAPIs, mAbs



Novel modalities CDMO
viral vectors, mRNA, antibody drug conjugates

Science & Lab Solutions (SLS)

Broad portfolio of fit for purpose consumables for R&D and testing



Chemistry for lab (Sigma-Aldrich®) and testing (Supelco®)



Biology reagents
media, antibodies, filters, etc.



Milli-Q® ultrapure water systems



Microbiology QA/QC
growth media, automated systems, etc.



Production & regulated materials
high purity chemicals, membrane, antibodies

Customer mix (illustrative)



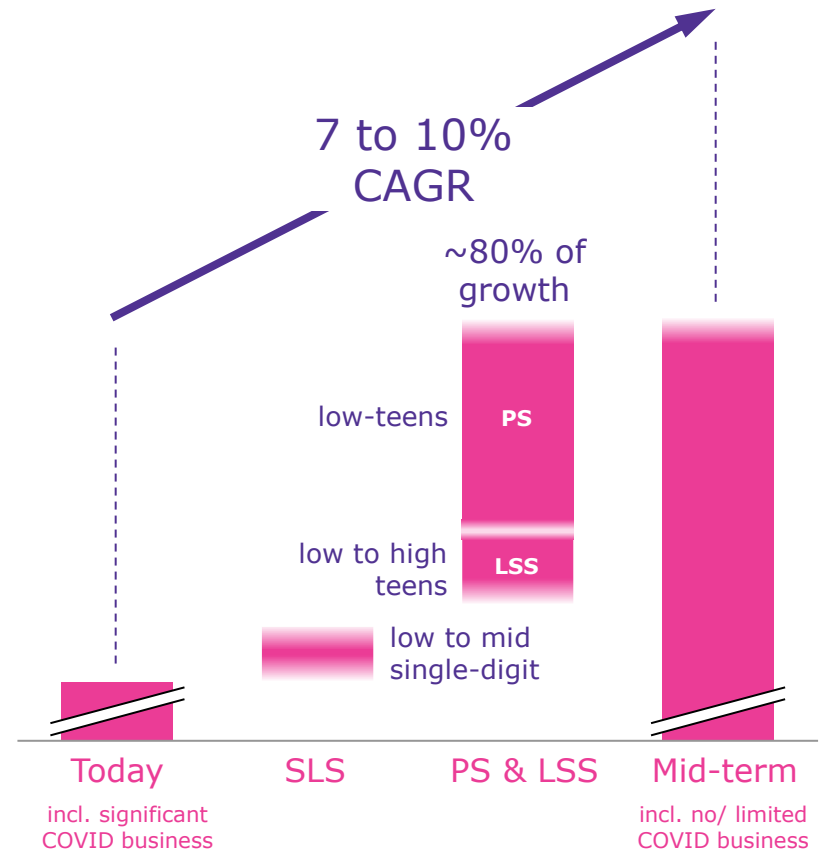
¹ Includes academia, government, hospitals, physicians; Acronyms: GMP = Good Manufacturing Practice, CTDMO = Contract Testing Development Manufacturing Organization, CTO = Contract Testing Organization, CDMO = Contract Development Manufacturing Organization, HPAPIs = High Potency Active Pharmaceutical Ingredients, mAbs = monoclonal Antibodies, mRNA = messenger Ribonucleic Acid
21 QA/QC = Quality Assurance/Quality Control



Core business strength driving increased confidence in mid-term outlook

 **Diversified industry leader**

Confident to deliver mid-term target corridor even if pandemic-related sales fall to zero over time



Illustration

Process Solutions

Executing network expansion & regionalization (esp. single use, filtration) and enabling customer transformation towards the factory of the future

Life Science Services

Leveraging leading contract testing organization and scaling focused CDMO with an integrated, full-service offering across multiple modalities

Science & Lab Solutions

Capturing durable growth across diverse, attractive customer segments

¹Acronyms: CDMO = Contract Development Manufacturing Organization



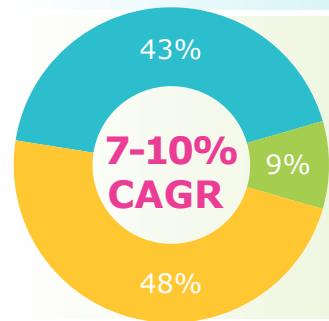
Life Science - Outlook

All business units contributing to attractive mid-term outlook

Sales split¹

Mid-term outlook²

Key differentiators



Process Solutions

Low-teens growth

vs. market of 9-10%



Life Science Services

Low to high-teens growth

vs. market of 9-10%



Science & Lab Solutions

Low to mid single-digit growth

vs. market of 3-5%



- **Capacity and regional expansion:** for single use, filtration, and cell culture media
 - **Broad portfolio coverage:** from upstream manufacturing to drug product fill & finish
 - **Holistic customer value:** training & problem solving (M Lab™ Collaboration Centers), regulatory & filing support (Emprove®)
 - **Innovation leadership:** enabling factory of the future (BioContinuum™), templates for novels
-
- **Comprehensive services:** across testing, development, and manufacturing (CTDMO)
 - **Leading contract testing organization:** biosafety testing, product characterization, lot release (BioReliance®)
 - **Scaling focused CDMO:** supporting modalities with high growth & expertise requirements
 - **Technology leadership:** deploying innovative process technologies with product development feedback
-
- **Broad and relevant portfolio:** leading offerings across chemistry, biology, microbiology, ultrapure water, diagnostic materials
 - **Omnichannel engagement** including leading eCommerce platform, relationship managers and technical teams
 - **Diversified footprint, global reach:** sales & growth balanced across regions & customer segments
 - **Resilient growth profile** with low volatility, robust & independent drivers across end customers

¹Based on H1 2022, CAGR is organic mid-term ambition including anticipated fading of COVID contribution; ²market growth rates are excluding COVID effects; ¹Acronyms: CTDMO = Contract Testing Development Manufacturing Organization



Process Solutions – Strategic Priorities

Strengthening local infrastructure and innovating to sustain leadership

Strategic focus



Core

Highlights

Capacity Expansion & Regionalization

Key Portfolios	NA	EU	APAC
Single Use	✓	✓	✓
Filtration	✓	✓	
Cell Culture Media	✓	✓	

- Serve **regional demand**
- Improve **customer proximity**
- Reduce **network risk**



Growth

APAC

WuXi, CN – Single use



(€100 m investment)
Assemblies,
custom design

Shanghai, CN – M Lab™



Train,
Troubleshoot,
Collaborate

- Address **unique needs & provide solutions** for local customers
- Increase **regional autonomy**
- Shorten **lead times**



Innovation & Digital

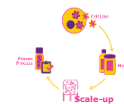
Digitalization, productivity, robustness

BioContinuum™



e.g., launch of Bio4C™ Software for process control, optimization

Products for novels



e.g., launch of VirusExpress® (suspension cell lines, media)

- Secure **future leadership**
- Enable **factory of the future**
- **Set the standard** in novels



Robust supply enabling attractive core growth, APAC and innovation as accelerators

Life Science Services – Strategic Priorities

Building focused end to end multimodality CDMO



Strategic focus



Core

Highlights

CTO






 <p>Innovating for speed & quality</p> <p>Blazar™ Rapid molecular detection in mAbs</p>	 <p>Shaping testing paradigm alongside drug developers in novel modalities</p>
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- **Leading player** with regulatory/technical expertise & track record
- Differentiated **technology**
- **Broad** portfolio across modalities



Growth

CDMO

Focused segments in traditional modalities	 mAb Single use  Small molecule HPAPI
End-to-End in select novel modalities	 ADC mAb+API+ linker  Viral vector Templated manufacturing  mRNA API, lipids, LNPs

- Focus on select **high growth, high margin** markets & segments
- **Differentiated** capabilities in relevant modalities



Foundation

Global track record

 Global presence across NA, EU, APAC  GxP operations across testing & manufacturing	 Integrated solution from process development to commercial manufacturing & release testing
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- Building from **strong core capabilities**
- Investing for **scale and full capabilities**



Leading CTO and current CDMO footprint providing strong base for focused expansion in attractive segments

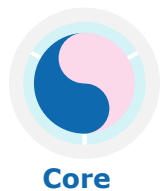
Acronyms: mAbs = monoclonal Antibodies, HPAPI = High Potency Active Pharmaceutical Ingredient, API = Active Pharmaceutical Ingredient, LNPs = Liquid Nanoparticles, GxP = "good quality" guidelines and regulations



Science & Lab Solutions – Strategic Priorities

Capturing durable growth across diverse market segments

Strategic focus



Core

Highlights

Portfolio enhancements

Chemistry  <ul style="list-style-type: none"> • Green chemistry • Photo-catalysis • Drug delivery • Lab separation 	Lab Water  <ul style="list-style-type: none"> • Remote access & management • Mercury-free, less plastic & electricity 	Biology & BioM  <ul style="list-style-type: none"> • Next-generation recombinant mAbs • Novel flow reagents • Sustainable sterile filtration
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- **Future-proofing** established podium positions
- **Enabling customers** to achieve productivity & sustainability goals



Growth

Customers, regions, channels


Diagnostics  <ul style="list-style-type: none"> • Quality materials and services • Custom test kits 	APAC  <ul style="list-style-type: none"> • Expanding in-region portfolio access • Tailoring go-to-market 	Seamless buying  <ul style="list-style-type: none"> • Personalized cross-channel shopping experience • Expanded self-service tools and procurement solutions
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- **Expanding** portfolio in high growth segments
- **Reaching and engaging** diverse customer base



Digital

Digital, robotics, automation

Automated workflows  <ul style="list-style-type: none"> • Technology bricks for pharma QC • Automated environmental and sterility testing 	Digital tools & services  <ul style="list-style-type: none"> • Lab informatics • Smart consumables • Retrosynthesis software
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- **Automating** pharma QC
- **Improving connectivity** and lab efficiency for customers



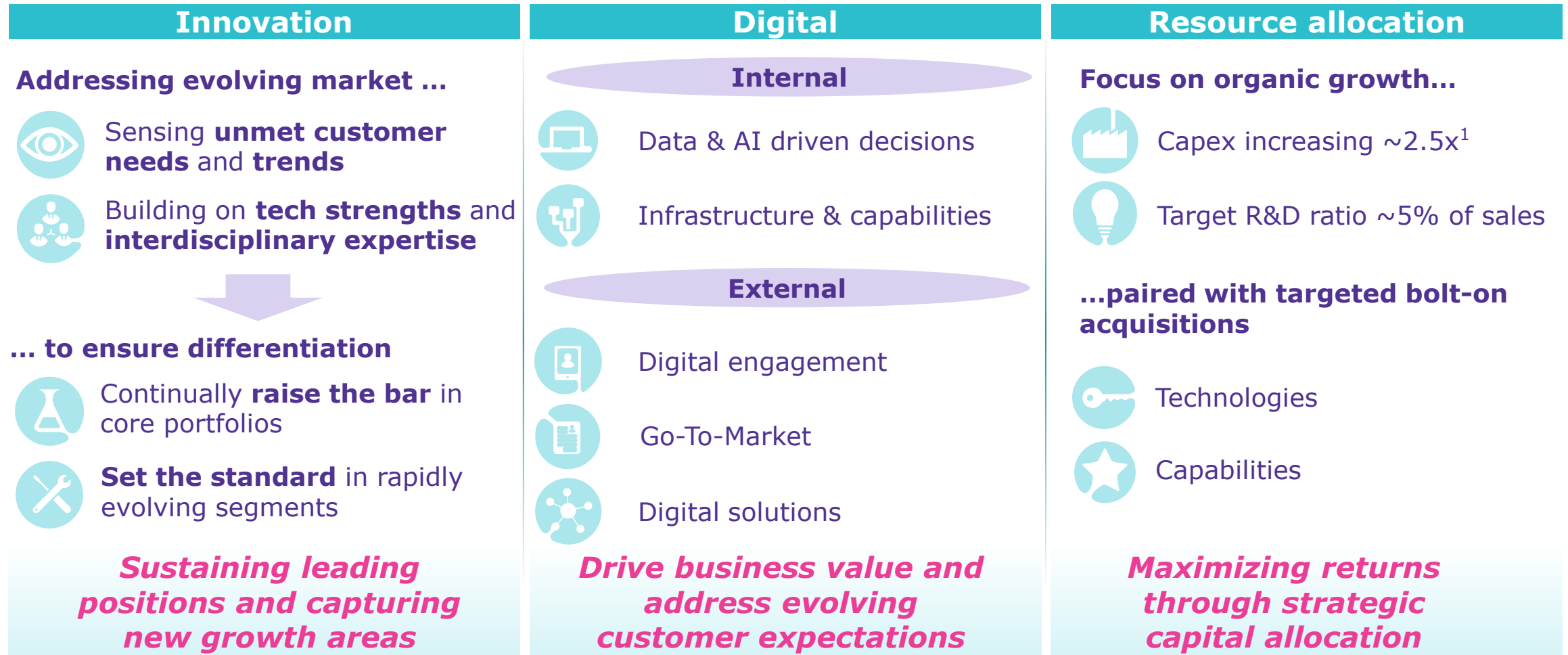
Targeted investments to address unique customer needs and leverage podium positions

Acronyms: BioM = Biomonitoring, mAbs = monoclonal Antibodies, QC = Quality Control



Innovation, Digital and Portfolio

Key supporting pillars of strategy for value creation



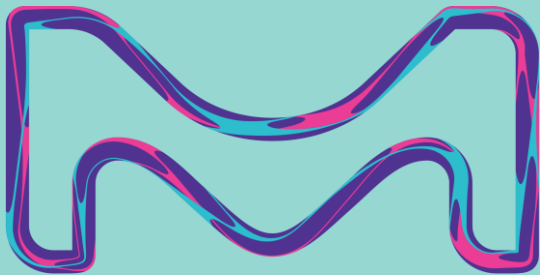
¹ Comparing average capex spend p.a. over the period 2016-20 with the period 2021-25; Examples: (1) Innovation: we use deep customer intimacy ($\sim 1.6m$ customers) to target R&D and are uniquely positioned at the intersection of disciplines with $>1,200$ colleagues in product/service development (incl. ~ 250 engineers, ~ 400 chemists, ~ 500 biologists) at over a dozen sites;

27 (2) Digital: a) internal: supply replenishment; b) external: chat with a scientist, upgraded e-commerce platform, Bio4C™



Healthcare

Focused leadership driving long-term growth



Healthcare

Well positioned to deliver significant long-term growth

Healthy risk profile



Resilience of our commercialized products¹ across all TAs



Evobrutinib BTKi and Xevinapant as late-stage opportunities with strong proof of concept



Early- to mid-stage pipeline with substantial growth drivers for the Oncology and Immunology portfolio

- Early- to mid-stage pipeline NRA
 - Xevinapant Cis-ineligible NRA
 - Xevinapant Cis-eligible NRA
 - Evobrutinib BTKi NRA
 - Recent Launches
 - Established Portfolio
- NRA = non risk adjusted

illustration

2025 >>>








Healthcare

Well positioned in a dynamic environment, focused leadership in R&D


Existing market trends unchanged...

- High growth in largest TA Oncology
- Precision medicines to further increase share
- Cost pressure and pricing volatility growing

... well positioned to grow further

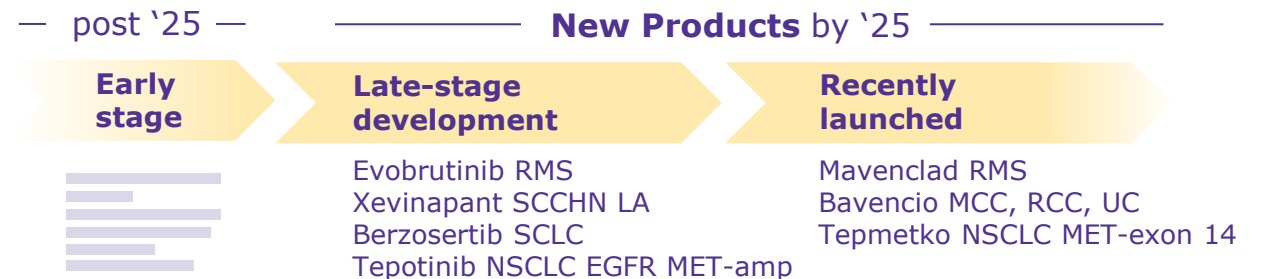
-  Long-term Oncology strategy with diversified clinical portfolio
-  Innovative models of treatment personalization, e.g. in Fertility
-  Diversified geographical sales footprint, lower exposure to potential U.S. pricing reforms
-  Global while local - 18 manufacturing sites and 4 R&D hubs across the globe
-  Broad spectrum of payer types due to TA and geographical variety

Focused leadership in R&D driven by recent launches & pipeline

-  SCCHN
-  Bladder cancer
-  MET driven tumors
-  ...

✓ From correlated to distinct uncorrelated risks

✓ Variety of pathways supported by new modalities
e.g. ADCs, Oral ATRi, TIGIT...



Introducing mid-term financial ambition of mid single-digit org. sales CAGR

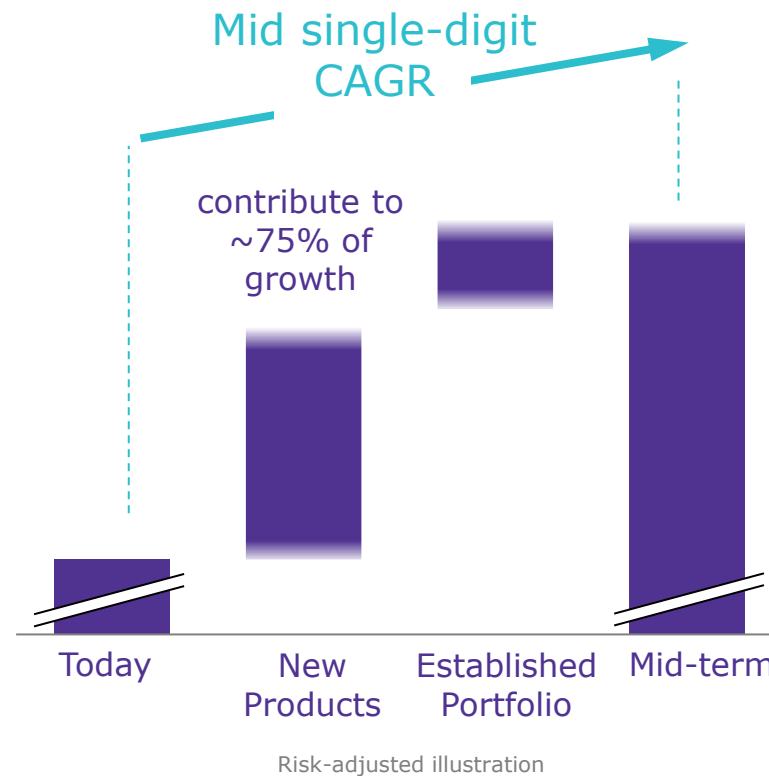
Healthcare

Growth driven by innovation, building on a solid established portfolio



Global specialty innovator

Profitable sales growth above global pharmaceutical market¹



New products

- Committed to drive **Wave 1** launches Bavencio[®], Mavenclad[®] and Tepmetko[®]
- **Wave 2** expands with evobrutinib (BTKi) with FiC potential in RMS and xevinapant (IAPi) aiming at setting up a new SoC in LA SCCHN

Sustainable long-term growth

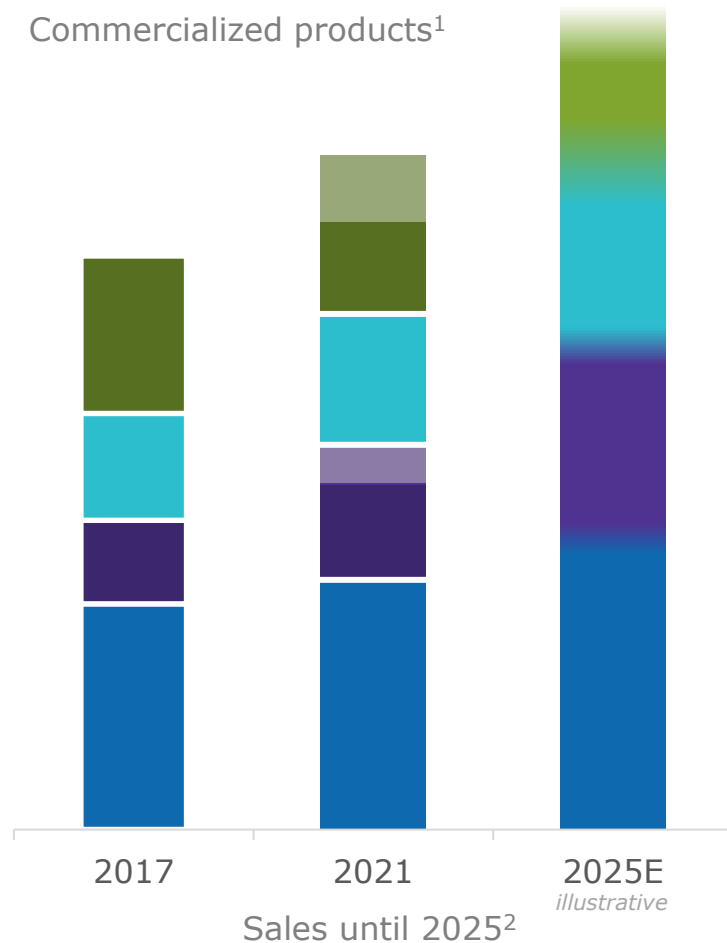
- New pipeline entrants in DNA damage biology, novel ADCs, TLR 7/8 underline an exciting and less risk-correlated approach in oncology and neuroinflammation

Learn more in the R&D Update Call Nov. 21



Today's commercialized products foundation for growth until 2025, fueled by recent launches; not yet reflecting further pipeline potential

Commercialized products¹



N&I

Mavencad®
MS



- On its way to become a blockbuster product. In the short-term, headwind as suppressed dynamic market

Rebif®
MS



- Decline in line with interferon market

fertility



- Mid single-digit growth, capitalizing on increasing awareness and access to treatment

oncology

Bavencio®
UC, RCC, MCC



- Strong growth driven by mUC 1L

Tepmetko®
METex14 NSCLC



- Targeted launch in niche indication

Erbix®
mCRC, SCCHN

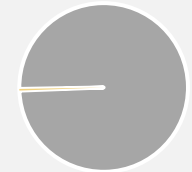


- Stable outlook³, leading in mCRC continuum of care

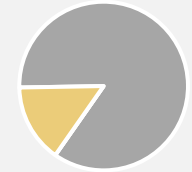
CM&E



- Mid single-digit growth
- Increasing prevalence of diabetes and cardiovascular diseases
- Mitigate VBP pressure in China through EM growth, life cycle management and portfolio expansion



2017



2021



2025E

■ Established Portfolio
■ Recent Launches⁴

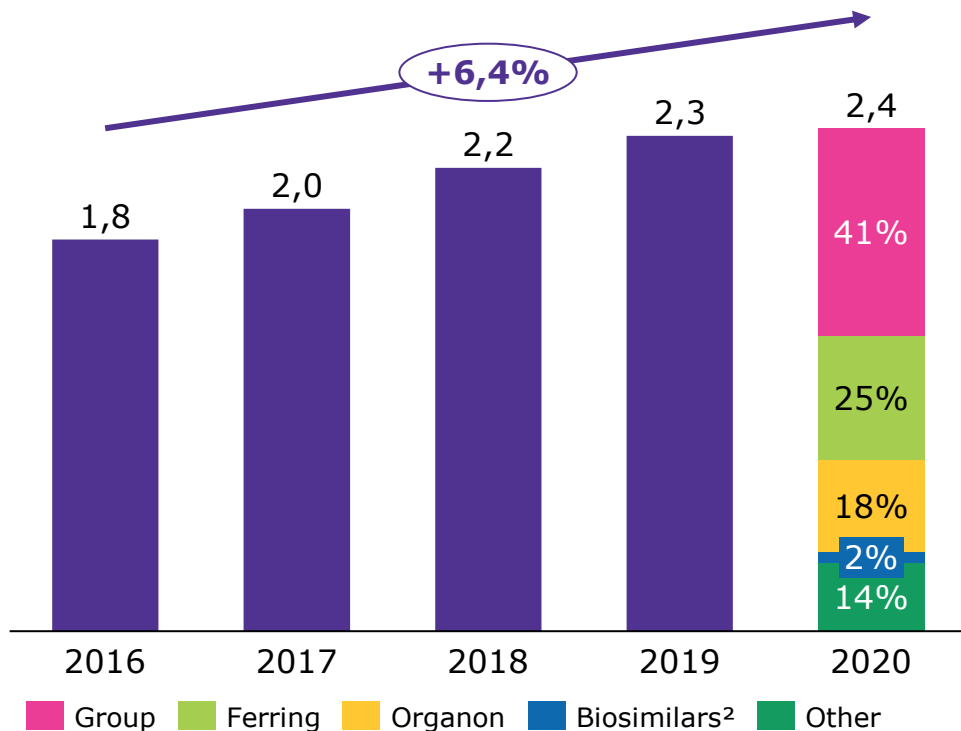
¹ Commercialized products = Established Portfolio + Recent Launches, excludes future launches/indications until 2025; ² Graph excludes Consumer Health Business, Biosimilars Business and others; ³ Sales in 2021 fueled by €59 m due to Eli Lilly supply agreement; ⁴ Includes Bavencio® (UC, RCC, MCC), Mavencad®, and Tepmetko® METex14



Healthcare

Strengthening our leadership in Fertility

Global Gonadotropin market in € bn¹



Strategies to expand our leadership position

GONAL-f The world's most prescribed r-hFSH treatment³

- Growing prevalence of infertility driven by delayed parenthood and lifestyle habits
- Increasing awareness and access to treatment

Pergoveris: Only recombinant FSH + LH product in the market

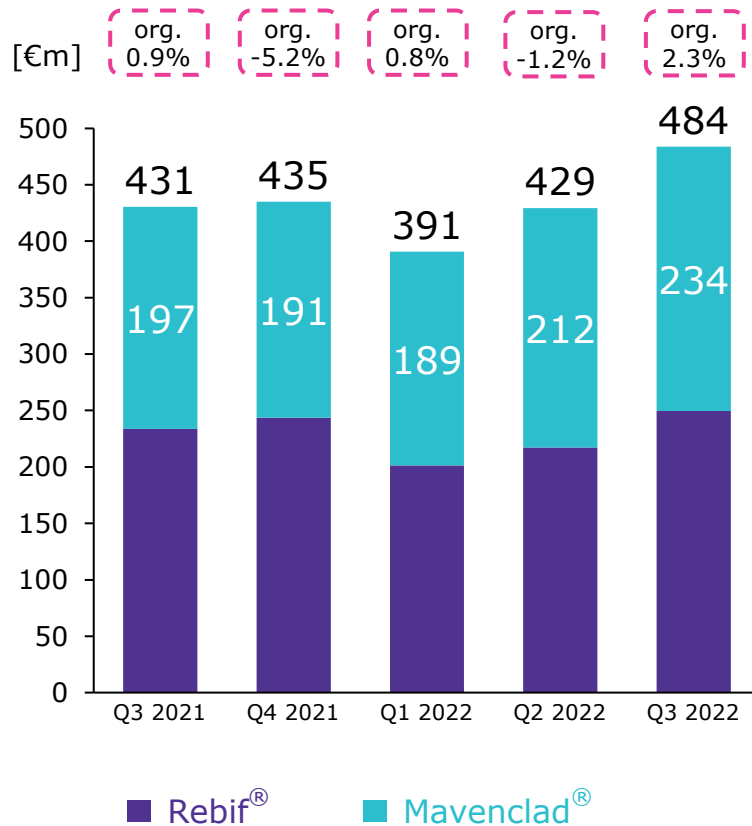
- Doubling sales and market share since 2017
- Strong growth potential by geographical expansion

Innovations & digital solutions (e.g. Philips partnership)

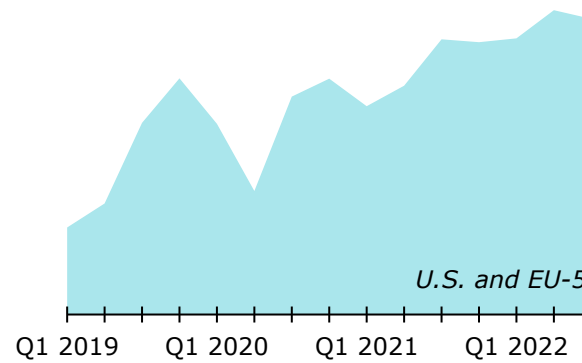
- Better treatment insights & improved convenience
- Contributing to higher live birth rates

Neurology & Immunology: Q3 Mavenclad[®] sales up +10% org. and muted Rebif decline drive franchise growth of +2.3% org.

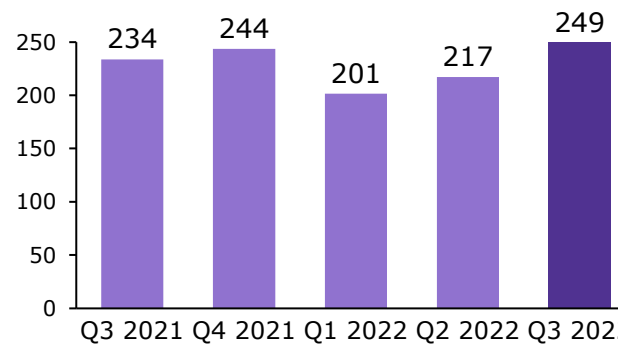
Sales development N&I, [€m]



Mavenclad[®] Y1+Y2 patients¹



Rebif[®] net sales, [€m]



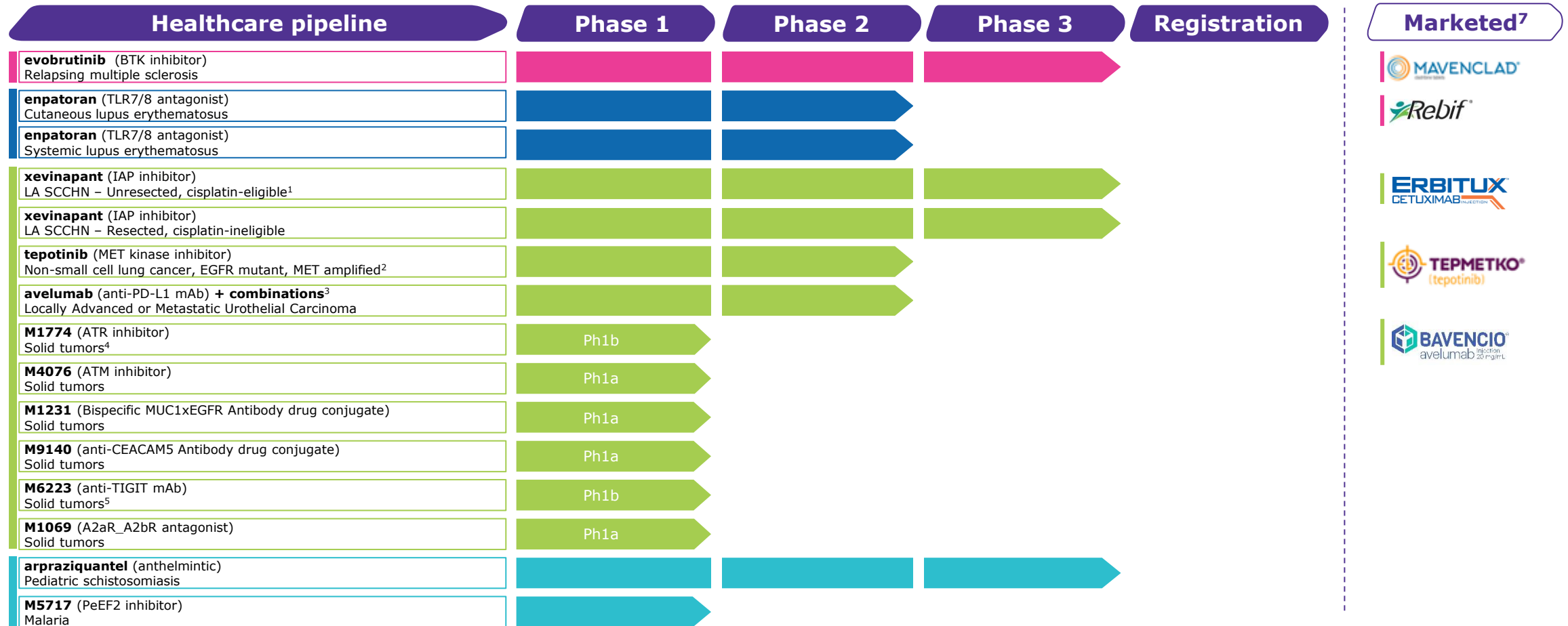
- Mavenclad[®] continues to be most prescribed oral HE drug in U.S. and EU-4 in dynamic market segment²
- Early launch market data suggests only ~5% patients switched treatment within 4 years of initiation³

- Muted Rebif[®] sales decline in Q3 due to one-off channel dynamics and lower comps
- Rebif[®] decline in line with interferon market trend, increased shift from platform to HE therapies

¹ Number of Year-1 and Year-2 patients in U.S. and EU-5 per quarter. Based on IQVIA and internal validation; ² Based on IQVIA and Stethos dynamic market data; ³ ECTRIMS 2022 – CLARENCE Study poster presentation, IQVIA
Acronyms: HE = High Efficacy

Group pipeline

November 10, 2022



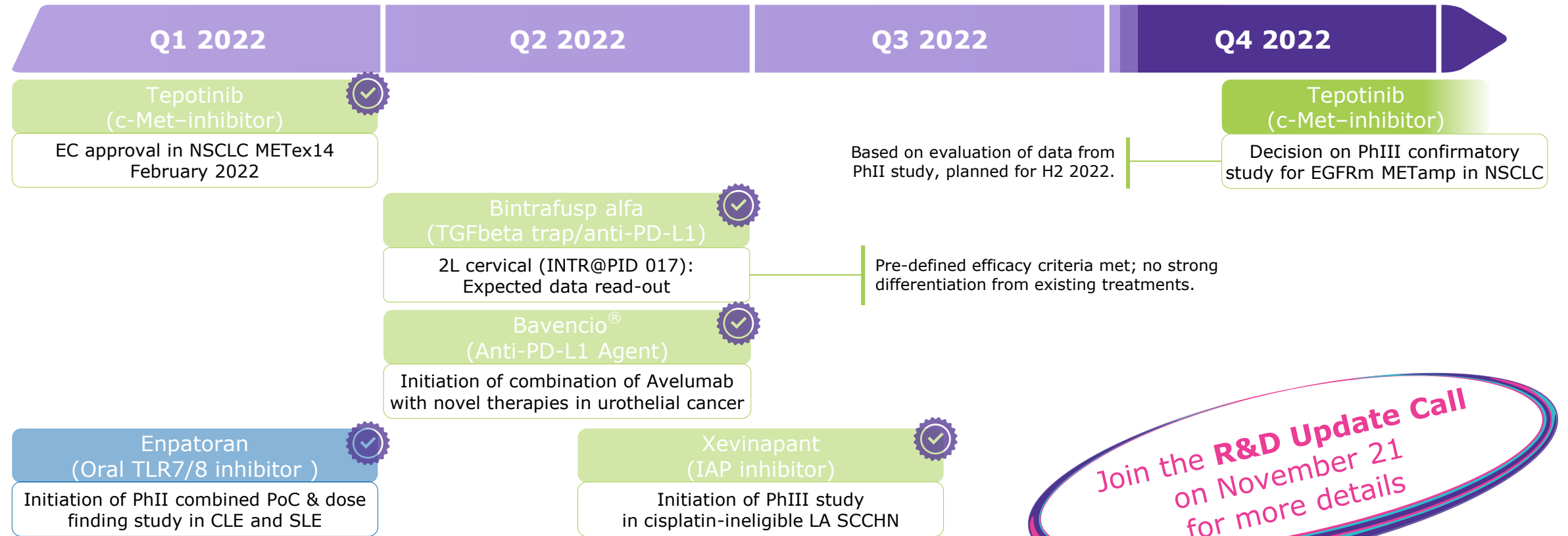
■ Neurology
 ■ Immunology
 ■ Oncology
 ■ Global Health
 ▶▶▶ Asset entering new phase⁶
▶ Current phase
 ▬ Previous phase(s)

Ph1a: phase 1a, dose finding; Ph1b: phase 1b, dose escalation/expansion and signal seeking

¹ In combination with cisplatin and radiotherapy in unresected LA SCCHN patients eligible for cisplatin. ² In combination with osimertinib. ³ Combinations include Sacituzumab Govitecan, NKTR-255 and M6223. ⁴ Study as monotherapy and in combination with niraparib and M4076 ATMi. ⁵ Includes combinations other than avelumab. ⁶ Registered study with open enrollment; subjects may not yet be enrolled. ⁷ Marketed products for information only. Unless noted otherwise, clinical programs conducted in collaboration with external partners are not shown unless Company has co-ownership of data. In such cases the indication is shown in italics.



Healthcare catalysts



Join the **R&D Update Call** on November 21 for more details

■ Oncology ■ Immunology

Acronyms: LA = locally advanced, SCCHN = squamous cell carcinoma of the head and neck, NSCLC = non-small cell lung cancer, TLR = toll-like receptor



Pipeline with uncorrelated risk and significant potential to drive topline growth from 2025

	PROMISE	INDICATION	EARLIEST SUBMISSION	
Tepotinib (MET inhibitor)	Overcoming resistance of Osimertinib (third gen. EGFR inhibitor)	2L EGFR+ NSCLC post Tagrisso	2023	Timeline visibility
Evobrutinib (BTK inhibitor)	Addressing chronic inflammation and progression between relapses, in addition to reducing acute inflammation with BIC ARR	RMS	2024	
Xevinapant (IAP inhibitor)	Transformative benefit – Maximizing chances for Cure for patients with locally advanced SCCHN	Cis-fit LA SCCHN Cis-unfit LA SCCHN	2025 ≥ 2027 ¹	
Berzosertib² (ATR inhibitor)	Blocking ATR “aster regulator” of DNA repair to enhance efficacy of TOP I inhibitors for patients with few treatment options	rSCLC		
M1231 MUC1/EGFR bi-specific ADC	Next generation “Triple Innovation” ADC for patients with solid tumors, aiming for effective delivery of potent chemotherapy payload with reduced in & off target toxicity	NSCLC ESCC	2025 2025	
Enpatoran TLR7/8 inhibitor	Small molecule for targeted inhibition of important lupus mediator TLR7/8, aiming for improved efficacy with low infection risk	CLE SLE	2026 2027	

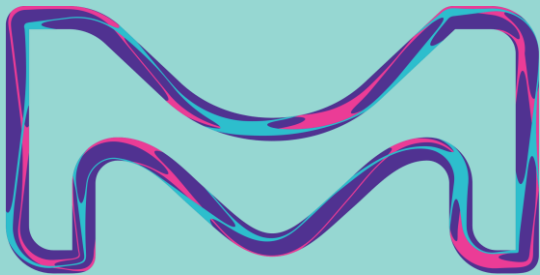
¹ depending on trial design

² Communicated June 3rd 2022: Following an interim analysis of DDRiver SCLC250, decision has been made to discontinue the study. Open innovation approach will be continued



electronics

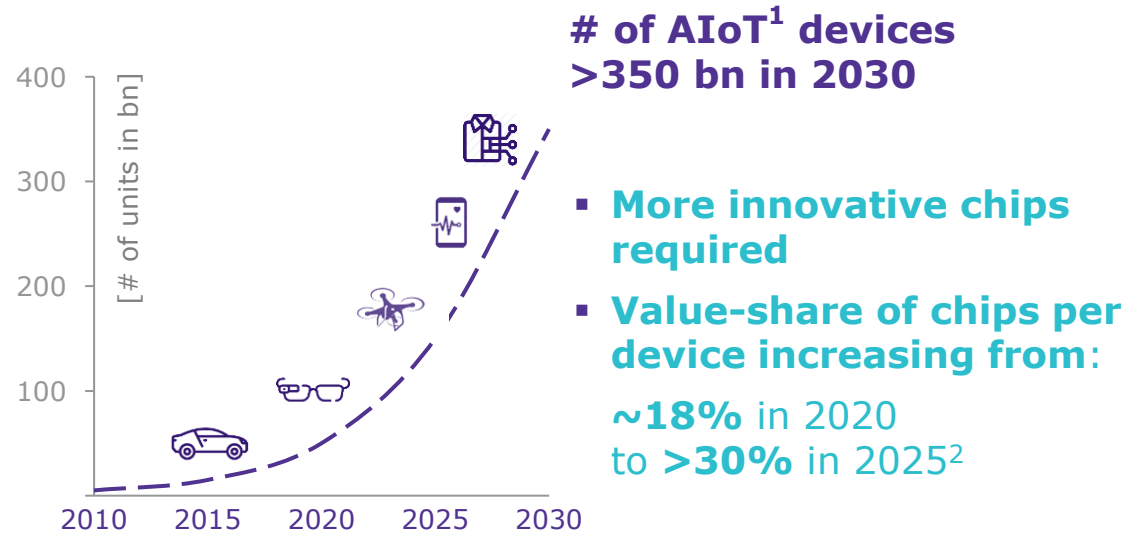
Shifting gears to growth execution



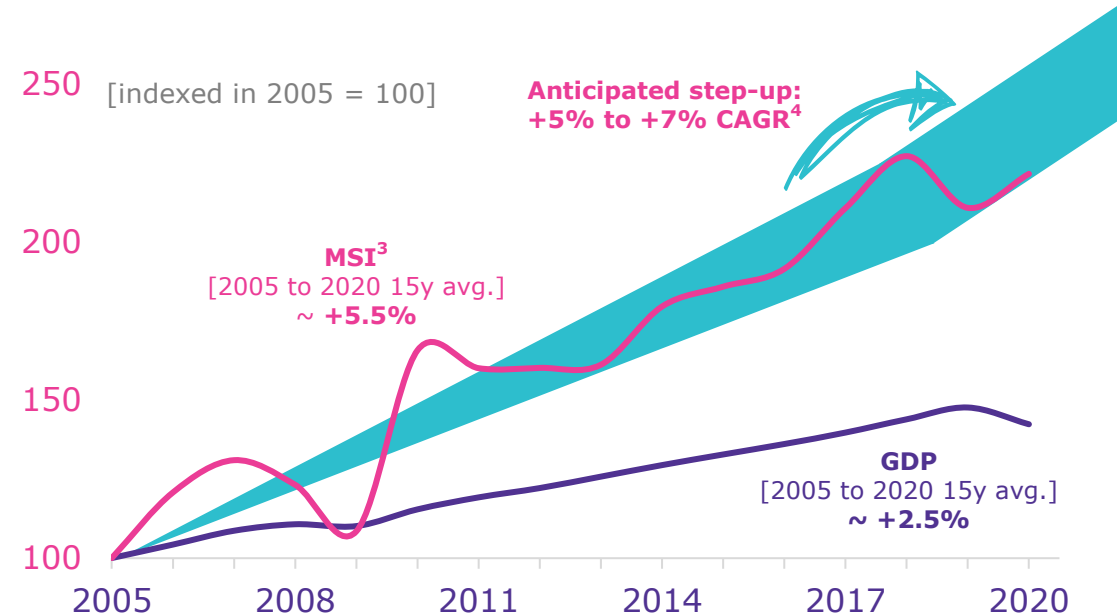
Electronics industry has clear roadmaps with vast market potential and substantial need for materials innovation

More applications than ever before to fuel Semiconductor growth

- 12% Automotive
- 7% Server / Storage / Communication infrastructure (5G)
- 6% Consumer (wearables/IoT)
- 5% Industrial/Medical/Military/Aviation
- 4% PC/Computing
- 4% Mobile phones / tablets



Growth expected to accelerate... ...with reduced upward cyclicality



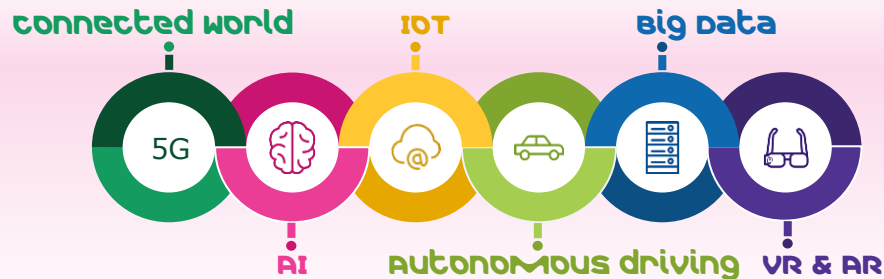
- Diverse end applications & higher capital discipline expected to reduce future cyclicality
- Semiconductor **Materials** show **lower cyclicality than Semiconductor market**

1) AIoT = Artificial Intelligence + Internet of Things; 2) McClean, Prismark Semiconductor and packaging report Q4 2020; 3) Million Square Inch of silicon wafers; 4) Group estimate based on industry forecasts

Electronics

Building on leading positions in semiconductor materials

External trends drive strong demand



Tech trends inevitably drive exponential data growth requiring semiconductors and displays in virtually all data applications

- Customers & governments significantly **accelerating semi capacity expansions**
- **Semiconductor materials market** expected to **accelerate growth** based on **broader demand**

Electronics well positioned to capture it

- ✓ **One of the strongest portfolios** – providing solutions necessary to **enable industry growth**
- ✓ **Enabling breakthrough technologies**, in **high value areas** of wafer processing & display innovation
- ✓ **Pioneering in high-throughput experimentation** and **Big Data & AI projects** with key customers
- ✓ **Shift to executing growth** accelerating **investment and innovation in sync** with customer plans

➤ **Confirming** mid-term financial ambition of **3 to 6% org. sales CAGR**

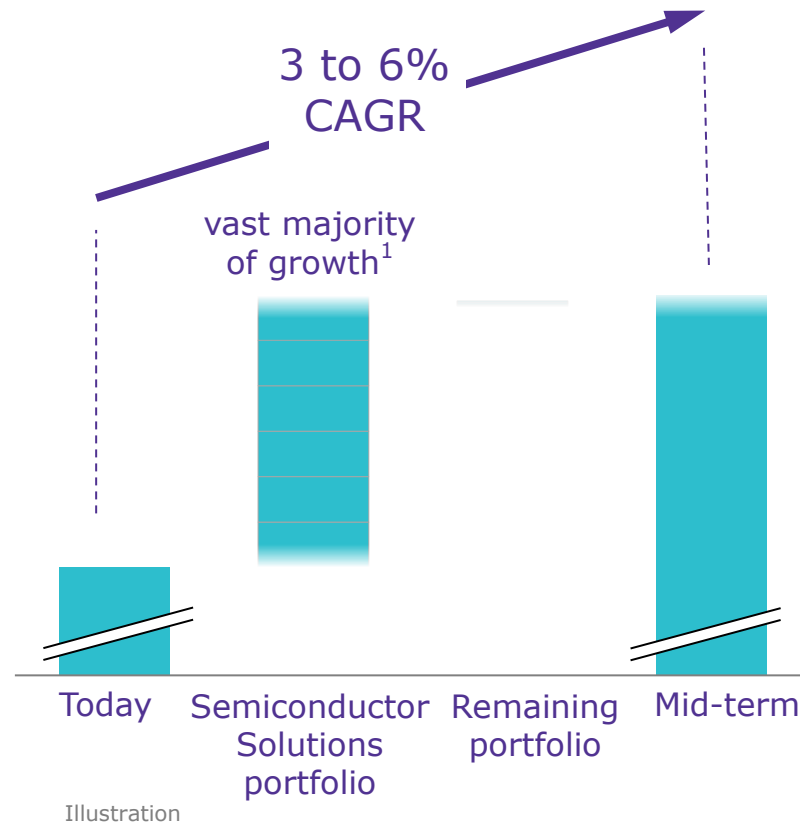
Abbreviations: AI = Artificial Intelligence; IoT= Internet of Things; VR = Virtual Reality ; AR = Augmented Reality

Significant progress on “Level Up” growth execution



A leading player

Executing on growth: Leading positions in semiconductor materials with one of the strongest portfolios in the industry



Semiconductor Solutions

CAGR 200 to 300bps² above underlying market of 5% to 7%

Display Solutions

CAGR of low single-digit decline with return to growth until 2025

Surface Solutions

Low single-digit growth CAGR

Delivering on Level Up:

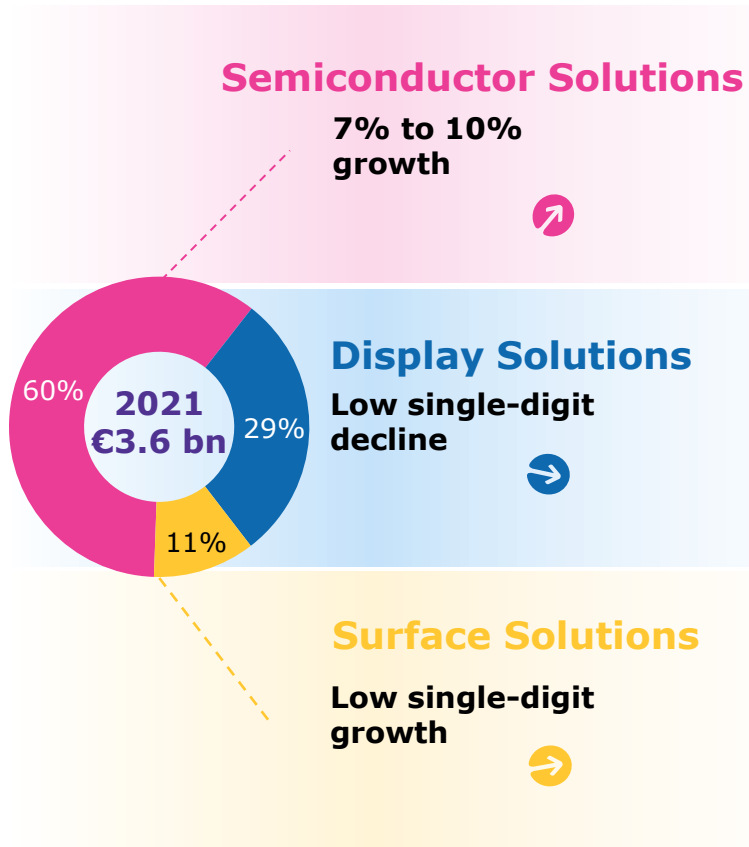
- Major capacity expansions in sync with customer CAPEX
- R&D roadmap catering to customers tech ramps
- Highly complementary bolt-on acquisitions



Electronics

Portfolio refocus drives mid-term guidance upgrade to 3 to 6% CAGR

Sales split¹



Mid-term outlook²

Semiconductor Solutions

7% to 10% growth



Display Solutions

Low single-digit decline

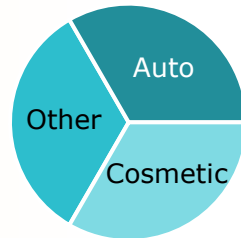
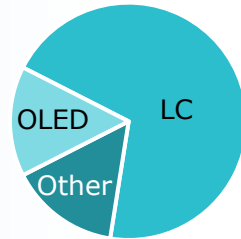
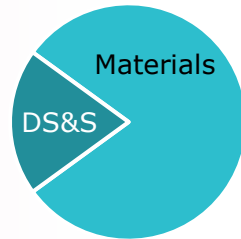


Surface Solutions

Low single-digit growth



Business Split³



Fundamental growth drivers

- Continued market growth due to technological advances (Artificial intelligence, 5G, Big Data and cloud, Internet of Things) serving customers in **Logic, Memory, Packaging and others**
- 5 to 7% market growth⁴
- 200 to 300bps above-market growth from share gains & better portfolio (incl. 100 to 150bps additional growth from integration top-line synergies)
- Driven by trend to **bigger TV size, higher resolutions, more mobile devices**
- 3 to 4% growth of total LCD m² area⁵, while price pressure continues
- 18 to 22% growth of total OLED m² area⁵ with slight to moderate market share gains
- OLED material market to exceed LC material market by 2021⁶
- Well balanced exposure to **automotive** and **cosmetics** end market
- Drivers: rising living standards, higher disposable income in growing markets & higher demand for high value products at reasonable prices
- Light vehicle production and relevant cosmetics end markets returning to growth in 2021 and reaching 2019 levels by 2022 and beyond⁷

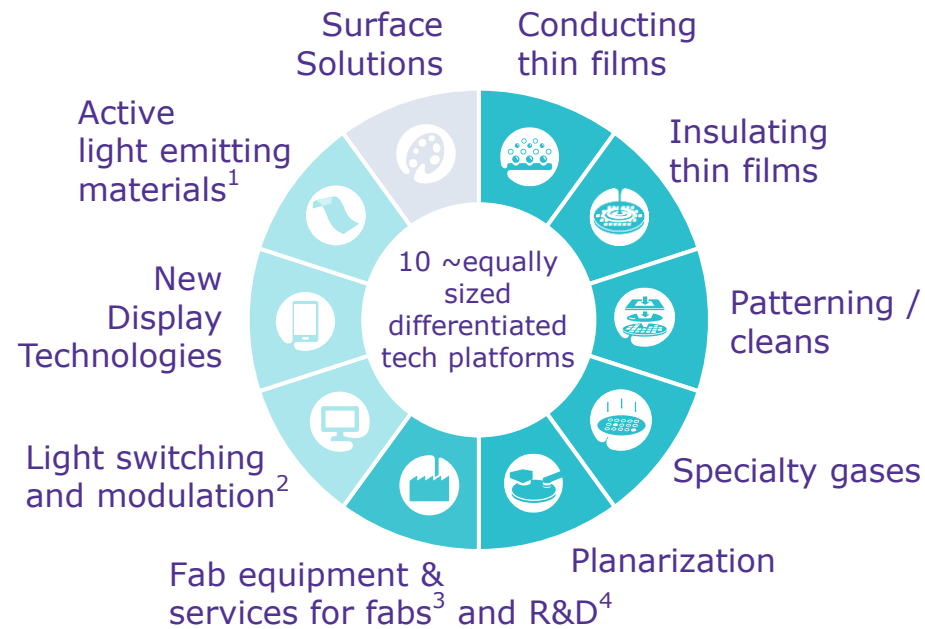
¹ Based on FY 2020, CAGR is organic mid-term ambition; ² growth rates are organic CAGRs; ³ indicative only

⁴ Source: Group estimate based on industry forecasts; ⁵ Source: Omdia Display Market Outlook, Q1 2020; ⁶ Internal Business Intelligence; ⁷ Sources: LMC Automotive Light Vehicles Forecast, Aug 2020 & Euromonitor BPC (Beauty & Personal Care) Aug 2020



Electronics: Successful transformation, ready for accelerated growth

An integrated electronics innovation leader with one of strongest industry portfolios



INDICATIVE chart of mid-term future portfolio composition

■ Semiconductor Solutions
 ■ Display Solutions
 ■ Surface Solutions

1) Incl. materials for OLED displays 2) Incl. liquid crystal displays
 3) Delivery Systems & Services 4) Intermolecular

Delivering on promises and above

- ✓ **Bright Future program**
 key deliverables & savings
- ✓ **€3.3 bn sales with**
 ~90% of sales **focused on electronics**
- ✓ Successful **integration of Versum**
- ✓ **Attractive, stable EBITDA pre margins**
- ✓ **Display & Surface well managed**
 according to Enterprise Planning Unit role
- ✓ Upgraded mid-term guidance of
3% to 6% sales CAGR

Everything in place to gain further speed as vital growth engine for Group



“Level Up” - Shifting gears from transformation to growth execution

Level up **scale**

- **Capacity investments** synchronized to **customers’ expansion plans**
- Ability to **tackle industry challenges** & supply reliability
- Continue **localizing footprint** close to customers in **Korea, Taiwan, China, and U.S.**

Level up **portfolio**

- Commitment to **relevant portfolio breadth** in **high growth areas**
- Diligent **bolt-on** acquisitions
- Targeted expansion of **portfolio**

**Enabling ambition
of 3 to 6% org. CAGR
2021 to 2025+**



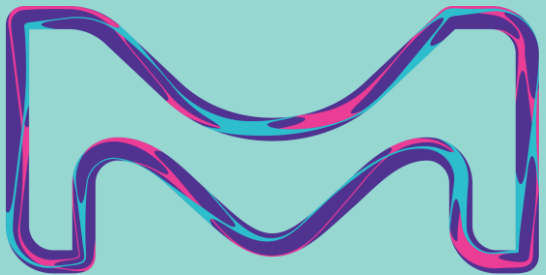
Level up **tech**

- Further sharpen **focus on profitable innovation**, addressing key inflection points
- Address **sustainable innovation**
- **Expand R&D** and keep one of the highest **R&D rates in the industry**

Level up **people & capabilities**

- **Attractive** employer for **NextGen talents**
- Drive **safety, quality & sustainability**
- Drive **data analytics & digital transformation**

sustainability



We are committed to three overall sustainability ambitions

1

Dedicated to human progress

In 2030, we will achieve human progress for more than one billion people through sustainable science and technology.

Our focus areas



Sustainable innovations and technology for our customers



Impact of our technologies and products on health and well-being

Focus SDGs



2

Creating sustainable value chains

By 2030, we will integrate sustainability into all our value chains.

Our focus areas



Sustainability culture and values

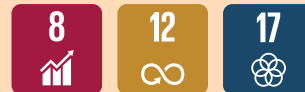


Sustainable and transparent supply chain



Securing our social license to operate in all regions

Focus SDGs



3

Reducing our ecological footprint

By 2040, we will achieve climate neutrality and reduce our resource consumption.

Our focus areas



Climate change and emissions



Water and resource intensity

Focus SDGs



Clear Metrics to drive execution and progress towards 2030 ambition

Goal	Metric	2021 (2020)	Target
1	Percentage of newly published patent families with positive sustainability impact	from 2022	n.a.
	People treated with our Healthcare products*	165 mio (183 mio)	1 bn people ambition ¹ : HC
2	Percentage of women in leadership positions	36% (35%)	Gender parity by 2030 ²
	Percentage of employees trained on sustainability	from 2022	n.a.
	Percentage of relevant suppliers covered by valid sustainability assessment*	21% ^{3a} /65% ^{3b} (n.a.)	visible increase until 2024 ³
	Environment, Health and Safety (EHS) Incident Rate	3.9 (3.4) ⁴	As low as possible
	Violations of Global Social and Labor Standards Policy	41 (29) ⁵	n.a.
	Lost Time Injury Rate (LTIR)	1.2 (1.3)	<1.0 by 2025 ⁶
3	Greenhouse gas emissions Scope 1+2*	1,843 kt (2,028 kt)	-50% by 2030 ⁷
	Scope 3 intensity: kg Greenhouse gas emissions per € gross profit	0.46 (0.47)	-52% intensity by 2030 ⁸
	Percentage covering purchased electricity by renewable resources	30% (27%)	80% by 2030
	Company Waste Score (WS)	-5.6 (-4.6)	-5% by 2025 ⁹
	Company Water Intensity Score (WIS)	from 2022	-10% by 2025 ¹⁰
	Wastewater quality: no harmful emission residues	from 2022	100% completion by 2030 ¹¹

*LTIP relevant

¹92 mio HC + 91 mio Prazi in 2020

²considers room for non-binary people

³by a)number, b)purchase volume

⁴incidents + severity vs. man-hours

⁵confirmed violations

⁶accidents with min. 1 day of missed work per 1 mio. man-hours

⁷vs. 2020 2,028 kt CO₂e

⁸vs. 2020 0.48 intensity ratio (kg scope 3 emissions per € gross profit)

⁹vs. 2016 WS 443

¹⁰vs. 2020 (updated) WIS considering local availability of water and no. of man-hours

¹¹below scientifically defined threshold



Product portfolio shift to increase positive sustainability impact



Using our **innovation power** to support sustainability goals of

- Group
- our customers
- society

2022 R&D initiative – Rollout of **R&D Sustainability Scorecards** across all sectors

+30%

“greener alternative” products in Life Science in 2021¹



R&D prioritization for products with positive sustainability impact

Resulting in more sustainable operations and products

Dedicated to human progress

1

Progress through sustainable science & technology by 2030



Creating sustainable value chains

2

Sustainability in supply chain and operations by 2030



Reducing ecological footprint

3

Achieving climate neutrality by 2040



Diverse human capital: Thinking, talking, and leading differently



Focus areas	Indicator	Status 2021 (2020)	Aspirations
Gender	Percentage of women in leadership globally	36% (35%)	Gender parity until 2030
Culture & Ethnicity	Percentage of underrepresented ethnic colleagues in US leadership	21% (20%)	Increase to 30% until 2030
	Percentage of nationals from Asia, Latin America, Middle East & Africa in leadership	16% (16%)	Increase to 30% until 2030
Inclusion	Inclusive Leadership Programs and participation of leaders across all business	37%	Participation of all leaders by 2026


<1.5%
adjusted¹ gender pay gap²

¹ The estimated difference in pay after accounting for differences in actual pay that are due to legitimate reasons (source: Mercer)
² End of year 2021 data



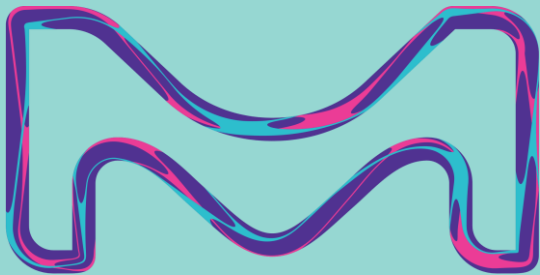
Company is committed to achieving climate neutrality by 2040 – net-zero target under evaluation



	SBTi ¹ near-term target 2030	Climate neutrality target 2040	SBTi ¹ Long-term net-zero target 2050
Scope	Effect of all reportable greenhouse gas emissions ²	Effect of all reportable greenhouse gas emissions ²	Effect of all reportable greenhouse gas emissions ²
Abatement	<p>Scope 1+2 ambition</p> <p>Absolute reduction of Scope 1+2 GHG³ emissions by 50% (vs. 2020)</p> <p>Scope 3 ambition</p> <p>Intensity reduction of kg Scope 3 GHG³ emissions per € gross profit by 52% (vs. 2020)</p> 	Continue ambitious abatement pathway for all three scopes beyond 2030 targets	Aim on absolute reduction across all three Scopes ≥90%
Compensation	Optional	Offset residual emissions	Offset residual emissions via carbon removal
	Confirmed	Confirmed	Under evaluation



Guidance and Executive Summary



Group

Full-year 2022 guidance

Net sales:

Organic: +6% to +8% YoY
FX: 5% to 8% YoY
~€22.00 – €22.90 bn

EBITDA pre:

Organic: +5% to +9% YoY
FX: 6% to 10% YoY
~€6.80 – €7.20 bn

EPS pre:

~€9.90 – €10.70

2022 business sector guidance¹

Life Science



Net sales

- Organic: +7% to +10%; FX: 5% to 8% YoY
- ~€10,200 m to €10,700 m
- Strong core business, PS main growth driver
- COVID-19 sales of up to ~€450 m in PS and up to ~€250 m in LSS

EBITDA pre

- Organic: +8% to +11% YoY
- FX: 4% to 7% YoY
- ~€3,700 m to €3,900 m

Healthcare



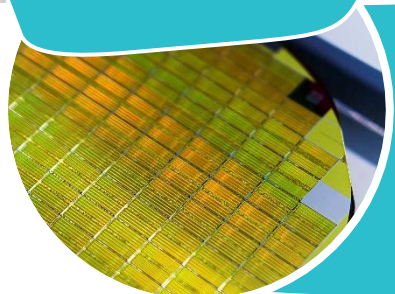
Net sales

- Organic: +4% to +7%; FX: 4% to 7%
- ~€7,700 m to €8,050 m
- Mainly driven by Mavenclad[®] and Bavencio[®]
- CM&E growing in the mid-single digits

EBITDA pre

- Organic: +3% to +5% YoY
- FX: 12% to 15% YoY
- ~€2,450 m to €2,550 m

Electronics



Net sales

- Organic: +2% to +5%; FX: 6% to 9%
- ~€4,000 m to €4,150 m
- Continuously strong Semiconductor Materials and DS&S amid first signs of market slowdown
- Display Solutions decline driven by significantly lower customer fab utilization post COVID-19

EBITDA pre

- Organic: -10% to -7% YoY
- FX: 13% to 16% YoY
- ~€1,190 m to €1,240 m

Additional financial guidance 2022

Further financial details

Corporate & Other EBITDA pre	~ -€570 m to -€600 m
Interest result	~ -€130 m to -€150 m
Effective tax rate	~22% to 24%
Capex on PPE ¹	~ €1.6 bn
Hedging/USD assumption	FY 2022 hedge ratio ~50% at EUR/USD ~1.16
2022 Ø EUR/USD assumption	~1.02 to 1.06

¹Based on gross additions to PPE on balance sheet (excl. leasing) in fiscal year to reflect planned Capex expansion more accurately



Group Executive summary on strategy update



shape

Uniquely positioned in fast-growing markets



grow

Sustainable growth >6% CAGR org.



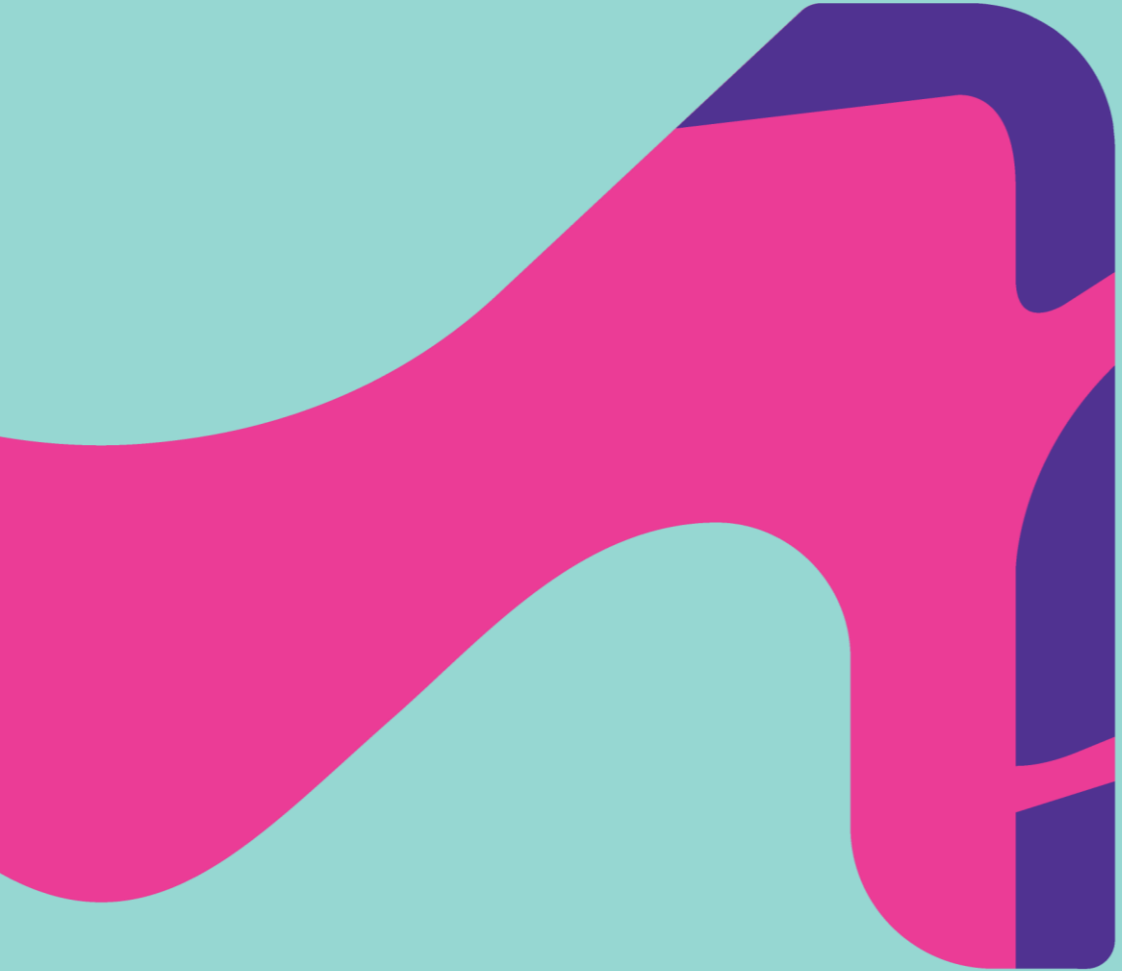
innovate

Pushing frontiers within and among sectors



enable

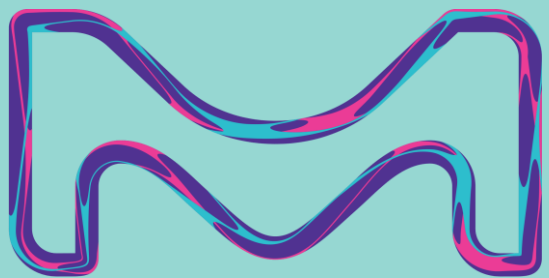
Sustainable solutions for customers and society



Appendix

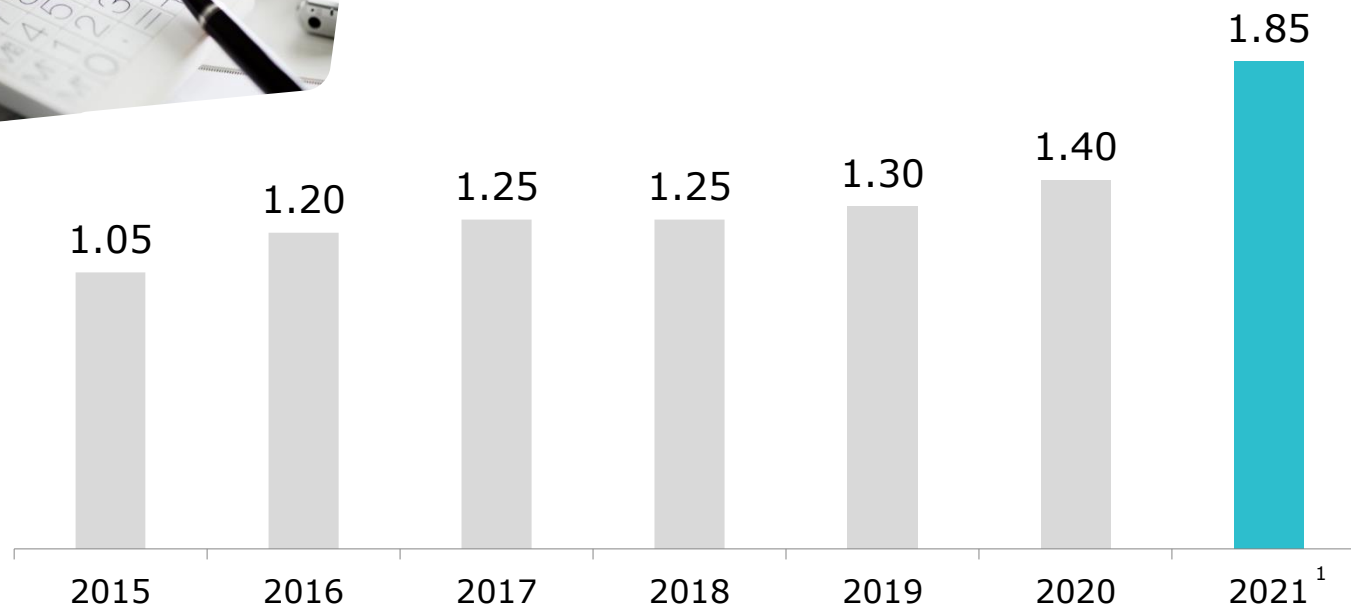


GROUP



Strong company performance drives all time high payment to shareholders

Dividend¹ development 2015 - 2021



2021 dividend

- Dividend of €1.85 (+32% YoY) per share proposed¹ for 2021
- Payout ratio of 21.2% of EPS pre in 2021; aiming for 20% to 25%
- Dividend yield² of 0.8%

¹Final decision is subject to Annual General Meeting approval

²Calculated with 2021 year-end share price of €227.00 per share.

Group's ownership structure

Shareholders of Merck KGaA, Darmstadt, Germany

- Shareholders hold ~30% of Group's total capital
- Share capital is divided into 129,242,252 bearer shares and one name share without nominal value
- Listed at German Stock Exchange's Prime Standard, member of the DAX 30
- Only bearer shares entitled to vote at Company's Annual General Meeting: **one share, one vote**

Supervisory Board

Its Chairman leads AGM, representing interests of Group's shareholders:

- Approving financial statements of the Group
- Working together with Executive Board, receiving reporting on progress regarding business and financial development at Group, Containing 16 members: **8 employee representatives, 8 independent representatives** (2 family representatives and 6 elected shareholder representatives)
- 2 committees: **Nomination and Audit Committee**

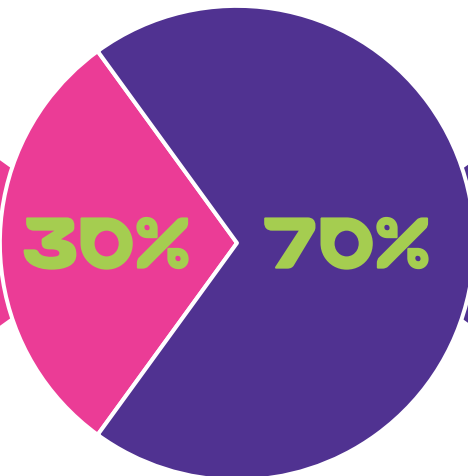
Nomination Committee
Defines criteria and makes proposals for new candidates

Audit Committee
Control systems, external auditing, financial statements

Finance Committee
financial statements, external auditing

Personnel Committee
Executive board members, contracts, compensation

R&D Committee
research activities of all sectors: HC, LS, EL



E. Merck KG, Darmstadt, Germany: Partners' Meeting & Family Board

- E. Merck KG, Darmstadt, Germany (99.9% the Family) holds ~70% of Group's total capital
- These 70% of the total capital are **not entitled to vote** at Company's AGM
- A Family Board represents the entrepreneurial interests of the Family (elected by partners' meeting)

Board of Partners

Elected by Family Board, and takes over some duties of a usual Supervisory Board:

- Appointment, dismissal and supervision of Executive Board members of Merck KGaA, Darmstadt, Germany
- Approves extraordinary business transactions and annual financial statements of E. Merck KG, Darmstadt, Germany
- Contains **5 members of the Family Board and 4 external members** of the business community
- 3 committees: **Finance, Personnel and R&D Committee**



Pay for performance reflecting the company's long-term strategy

Variable	40-50%	<h3>Long-Term Incentive Plan</h3> <ul style="list-style-type: none"> Reflecting the long-term strategy for Group's growth and (from 2022) sustainability ambition 4 years performance cycle: 3 years target achievement + 1 year holding period Based on virtual Group Share Units (Grant € divided through start share price, multiplied with the end share price) Financial targets: 50% Group Share Price vs. DAX + 25% EBITDA pre margin + 25% Organic sales growth From 2022 multiplied with sustainability factor (0.8-1.2) reflecting KPIs from each of the sustainability goals Corridors for each target and achieved targets published transparently ex-post in the compensation report Maximum cap: Maximum pay out 250%, maximum € cap for LTIP for each board member published Claw-back allows to retain amounts allocated from the Long-Term Incentive Plan 	<ul style="list-style-type: none"> + Performance of Group share price vs. the DAX 50% + EBITDA pre margin in relation to target value 25% + Organic sales growth in relation to target value 25% ✗ 0.8-1.2 Sustainability factor = 0-180% of allocated units
	25-35%	<h3>Profit Sharing</h3> <ul style="list-style-type: none"> Three-years average profit after tax of the E. Merck KG, Darmstadt, Germany, multiplied with individual permille rate From 2021 reduced individual performance factor of 0.8-1.2 can increase (bonus) or decrease (malus) the amount based on a set of criteria, incl. the 3 sustainability goals, disclosure of catalogue and reasons for if performance factor ≠ 1.0 Individual permille rate for each board member and maximum € cap for each board member published Staggered incentivization and minimum threshold value and maximum limit for profit after tax (€0.75/2.0 bn) Mandatory personal investment in Group Shares amounting to one third of the net payment of the profit sharing (4 year holding period) 	
Basic	6-9%	Pension Entitlements Defined contribution	
	0-3%	Additional Benefits Mainly contributions to insurance policies, personal security expenses, company car...	
	15-20%	<h3>Basic Compensation</h3> <ul style="list-style-type: none"> Fixed and non-performance related compensation Paid in 12 equal monthly installments €1.4 million for the chairman / up to €1.1 million for the members of the executive board 	
Maximum total compensation: reduced to €11.5 m Chairman, €9.5 m other executive board members			



Executive Board long-term incentive linked to sustainability

- Starting from fiscal year 2022, our sustainability strategy will be even more firmly embedded in the compensation system for the members of the Executive Board
- The sustainability factor encompasses three performance criteria according to the sustainability strategy and measures the performance indicators over a three-year target achievement cycle
- The sustainability factor depends on the degree of target achievement and may increase or decrease the outcome of the financial performance indicators of the LTIP (Performance Group Share vs. DAX, EBITDA pre margin, organic sales growth) in the range of 0.8x and 1.2x

Parameters for the sustainability factor for the 2022 tranche of the LTIP¹:

Performance Criteria	%	Performance Indicators
Dedicated to human progress	20%	People treated with our Healthcare products
Creating sustainable value chains	40%	Percentage of relevant suppliers (in terms of number and purchase volume) that are covered by a valid sustainability assessment
Reducing our ecological footprint	40%	Scope 1 + 2 greenhouse-gas emissions



Strategic focus areas in sustainability

Sustainability innovation and technology for our customers

- Sustainability as integral part of **product design**
- Enable **customers** to reduce sustainability footprint
- SBV as a tool to assess net sustainability **impact**

Health and wellbeing impact of our technologies and products

- Health (Healthcare, Life Science) & wellbeing (Life Science, Electronics)-related impact of:
 - Group **products**
 - Group's **activities**

Climate change and emissions

- **Greenhouse gas emissions** Scope 1, 2, 3
- **Renewable energy**
- **Energy efficiency** in operations



Sustainability culture & values

- **Diversity & inclusion** activities
- Sustainability **mindset**: Communication, trainings, incentive schemes
- **Employee engagement**

Sustainable and transparent supply chain

- Supply chain management activities:
 - Sustainability **assessments**
 - Supplier **data management**

Secured social license to operate across regions





- **Safe & ethical** research, **ethical & compliant** business conduct
- **Plant & process** safety, **patient & product** safety
- **Stakeholder** engagement & communication

Water and resource intensity

- **Waste & water** management and **recycling**
- **Circular** activities

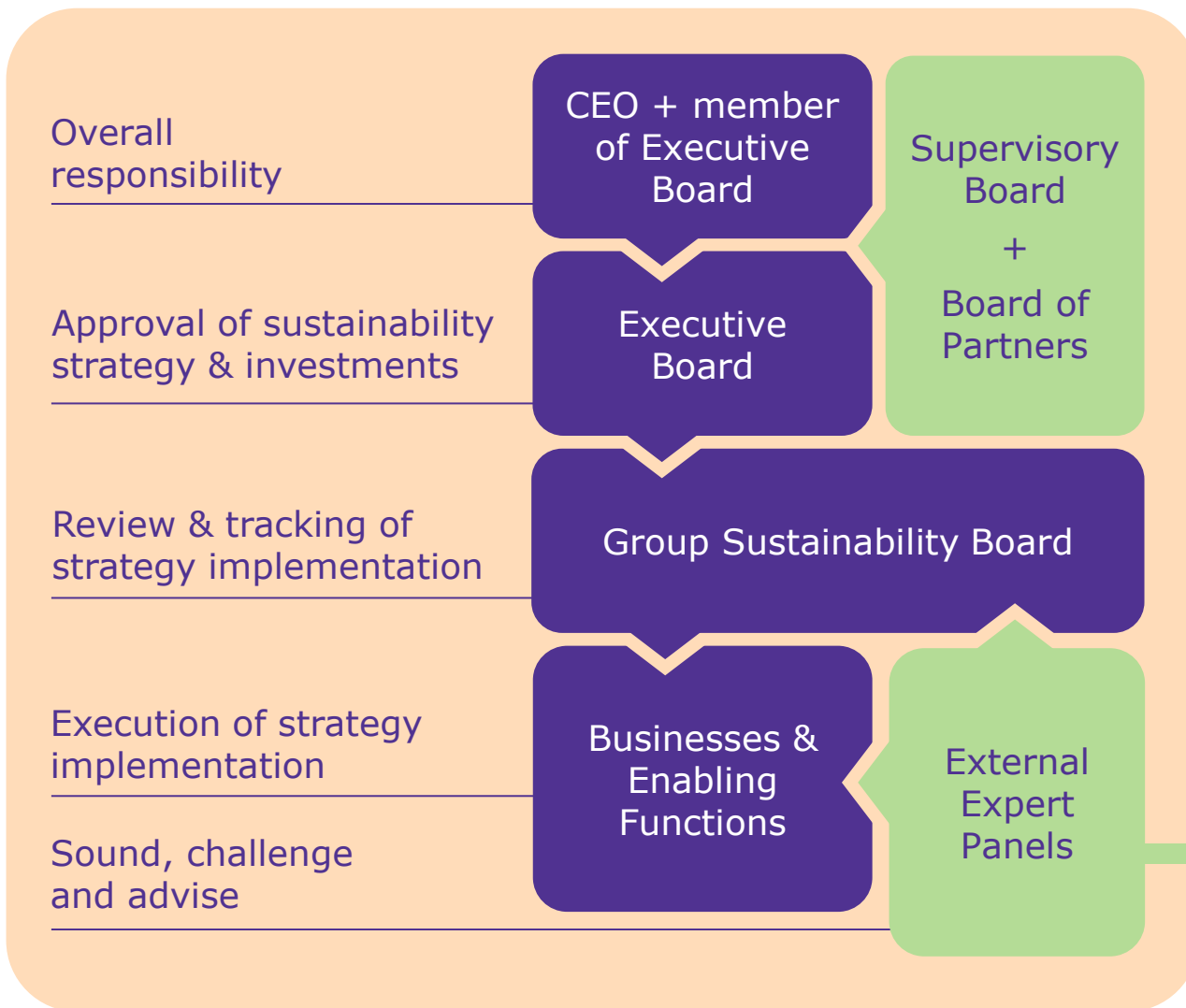
Reduce our environmental footprint: Emissions, Water and Waste



Goal 3	 Climate neutrality by 2040	 Enhance water efficiency & purity	 Reduce waste impact
Target	<ul style="list-style-type: none"> Lower scope 1+2 GHG³ emissions by -50%⁴ Source 80% of purchased electricity from renewable sources until 2030 Intensity reduction of Scope 3 per € gross profit by 52% until 2030⁴ 	<ul style="list-style-type: none"> Enhancing water efficiency: improve Group water intensity score by -10% by 2025⁴ Harmful emission residues should be lowered below a scientifically defined threshold by 2030 	<ul style="list-style-type: none"> Based on the Group Waste Score, we have set ourselves the goal of reducing the environmental impact of our waste by -5% by 2025 compared to 2016
Status	<ul style="list-style-type: none"> ➤ Scope 1+2: 1,843 kt¹ (2,028 kt²) ➤ Renewable energy: 30%¹ (27%²) ➤ Scope 3: 5,716 kt¹ (5,030 kt²); emissions/profit ratio: 0.46¹ (0.47²) ➤ Scope 1-3 targets approved as Science Based Targets  	<ul style="list-style-type: none"> ➤ 2025 target achievement will be reported from fiscal year 2022 onwards ➤ 2020 target of -10% water use in stressed areas has been overachieved: -27% 	<ul style="list-style-type: none"> ➤ Reduction of waste impact (Group Waste Score): -5,6%¹ (-4,6²)



Effective sustainability governance structures and frameworks



Adherence to main codes, principles, standards, and frameworks, e.g.:

- UN Global Compact & UN Guiding Principles on Business and Human Rights
- Chemie³
- Responsible Care
- Together for Sustainability

Group policies, e.g.:

- [Human Rights Charter](#)
- [Responsible Sourcing Principles](#)
- [Social and Labor Standards Policy](#)

- Group Sustainability Advisory Panel
- Group Ethics Advisory Panel
- Group Digital Ethics Advisory Panel

External stakeholders assess our engagement



As of 2021, Group received an MSCI **ESG* Rating of AAA.**

*Environment, Social, Governance



2022 Sustainalytics rates Group with 21.3 and medium ESG risk exposure. This ranks us **#9 from 451** in our pharma subindustry.



Since 2008, Group is part of **FTSE4Good Index**, measuring the performance of companies with strong ESG practices, ranking percentile rank 95 (top 5%).



In the ISS corporate ESG ranking Group achieved **prime status** and B-ranking, putting us in the 1st decile.



Since 2019, the Company share is again **included in STOXX Global ESG Leaders Index**, a sustainability index based on key environmental, social and governance criteria.



Group has been **reconfirmed** as a constituent of the **Ethibel Sustainability Index (ESI)** Excellence Europe since May 2020, based on VigeoEiris.



The Group received gold status in 2022, stating Company is among the **top 3% of companies.** **EcoVadis** annually examines ~75,000 suppliers from 160 countries.



CDP Climate: In 2021, we scored "B" (2020: B). **CDP Water:** In 2021, we received a "A-" (2020: B).



In the 2021 **Access to Medicine Index** Group ranked **eighth place.** We were recognized for our performance in R&D, where we ranked fifth.

Group

Regular portfolio review remains key to success

strong track record

- Acquisitions and divestments are part of Group's history
- Licensing and partnerships remain on our agenda
- All prior transactions earned their cost of capital



defining portfolio guard rails

- Three strong pillars with no business marginalized
- Leading market position in attractive markets
- Focus on innovation and sustainability through science and technology



clear financial M&A criteria

- Supporting profitable growth strategy
- $IRR > WACC$
- EPS pre accretive
- Maintain investment grade rating

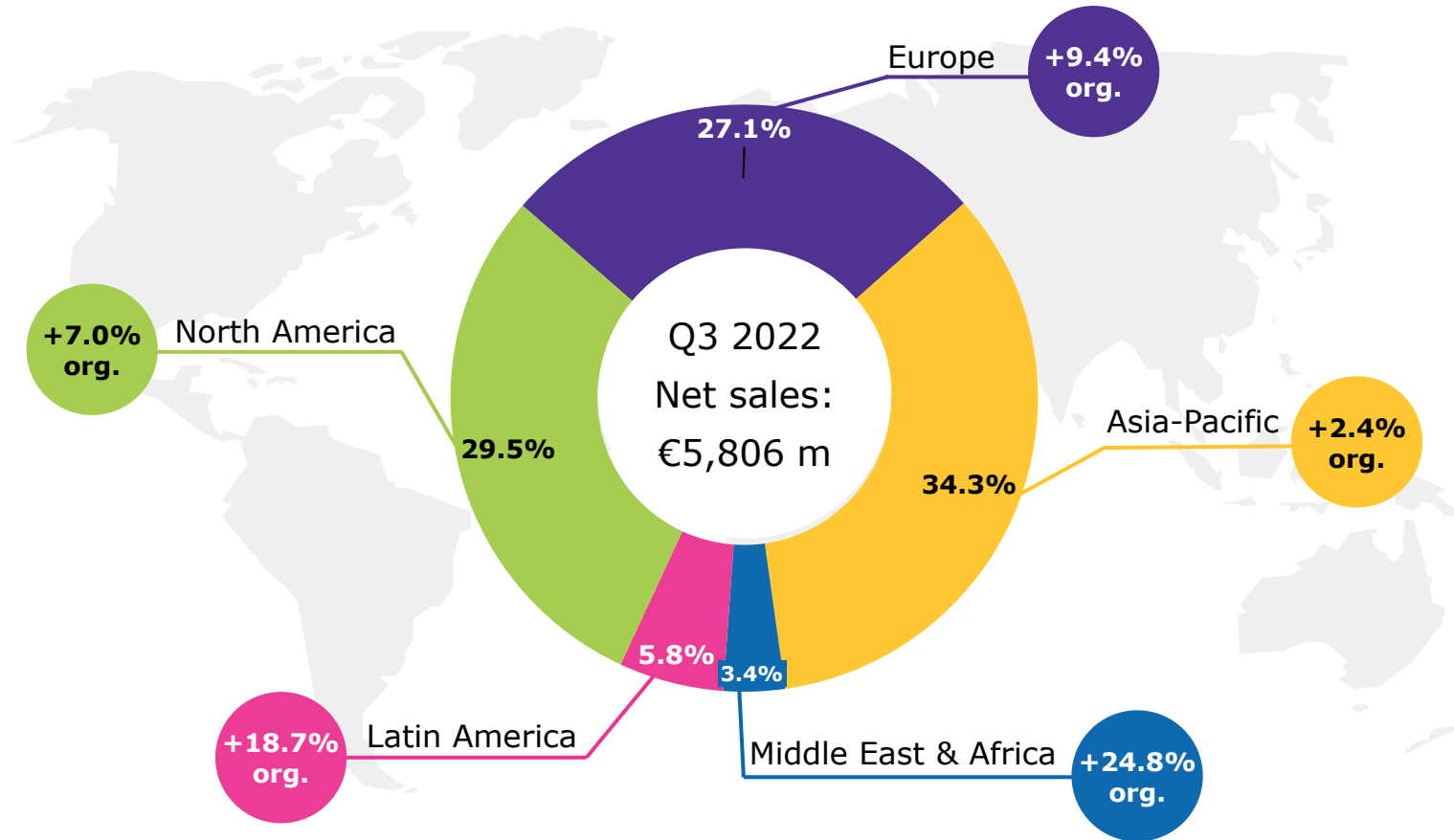


Current set-up is strong and organic investment opportunities are attractive

Ready to pursue external growth opportunities following swift deleveraging post Versum

Europe largest growth contributor in absolute terms with strong performance across all three sectors

Regional breakdown of net sales [€m]



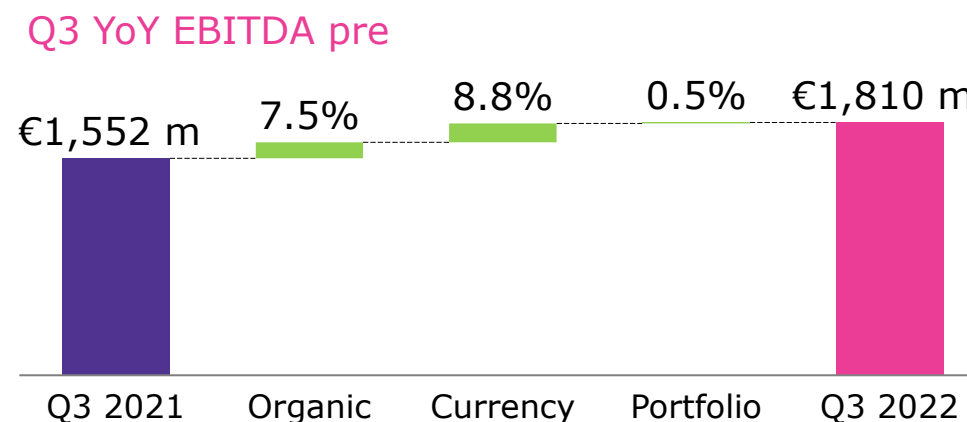
Regional organic development

- APAC: Science & Lab Solutions, Healthcare and Semi main growth drivers, more than offsetting Display decline
- Europe: Healthcare and Life Science primary growth drivers
- North America: Life Science main growth driver, backed by all business units
- LATAM: Oncology and CM&E primary growth drivers, further supported by Life Science across the board
- ME&A: CM&E and Oncology drive growth

Life Science and Healthcare drive strong organic sales growth; Sales and EBITDA pre further supported by significant positive FX effects

Q3 YoY Net Sales	Organic	Currency	Portfolio	Total
Life Science	8.7%	9.2%	1.3%	19.2%
Healthcare	8.7%	8.2%	0.0%	16.9%
Electronics	0.4%	10.2%	0.0%	10.6%
Group	7.1%	9.0%	0.6%	16.8%

- Life Science: High single-digit org. growth mainly driven by Process Solutions (+11% org.) and Science & Lab Solutions (+8% org.); Life Science Services temporarily softer (+3% org.)
- Healthcare: Recent launches up +26% organically (primarily fueled by Bavencio® and Mavenclad®), driving +9% org. growth; CM&E portfolio growing +6% organically, incl. EM catch-up
- Electronics: +15% org. growth in Semiconductor Solutions more than offsetting -32% org. decline in Display Solutions; Surface growing +4% organically

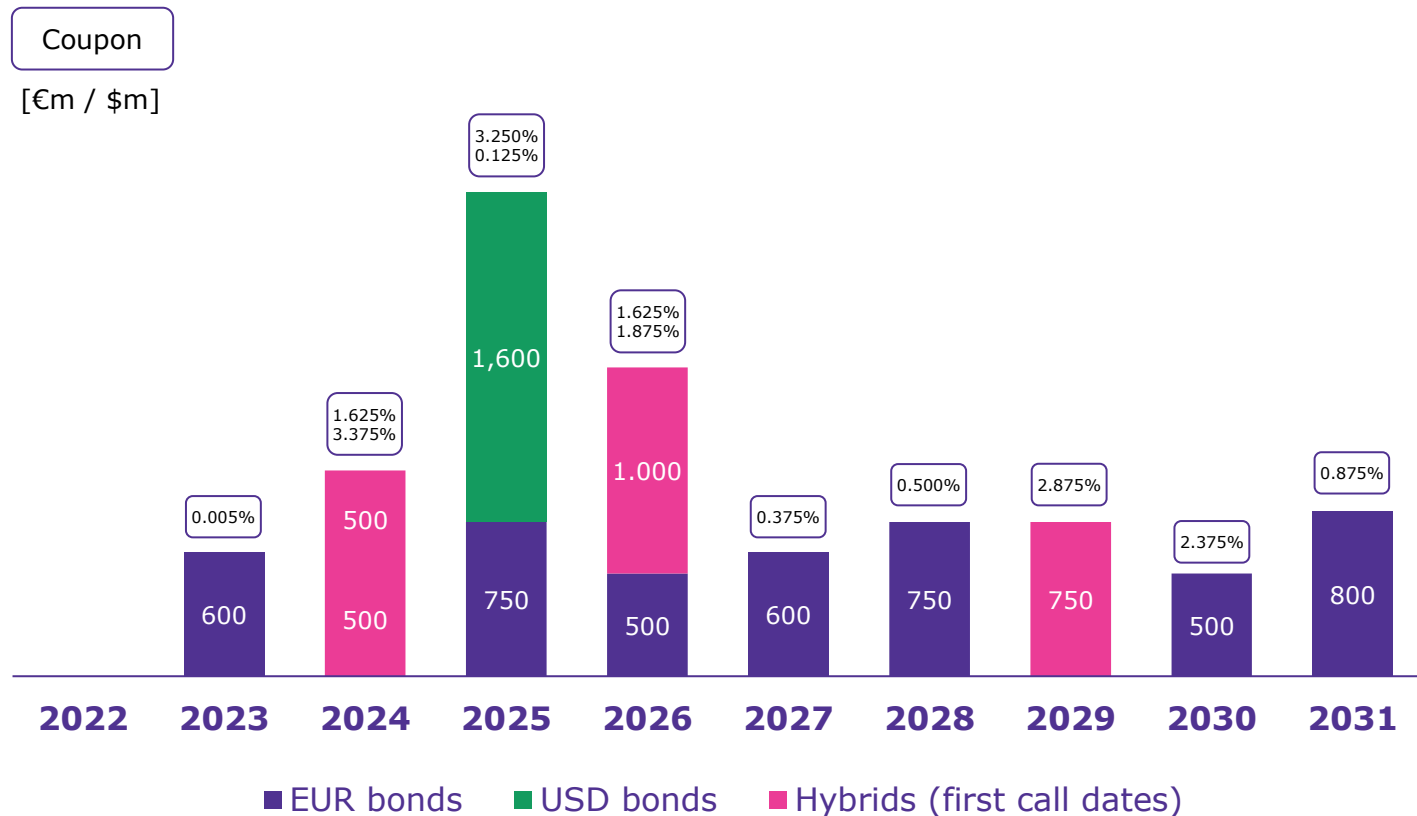


- EBITDA pre growing above sales (+7.5% org.) despite increasing input costs for raw materials, energy and logistics and significant Display decline
- Life Science and Healthcare driving org. EBITDA pre growth with margins at or above prior-year level
- Positive FX effect of +9% across various currencies with largest positive impact from USD and CNY; partly offset by hedging



Credit details

Maturity profile as of September 30, 2022



Credit rating information

	LT Rating	Last LT Rating Change	Outlook	ST Rating
MOODY'S	A3	21.10.21	Stable	P-2
S&P Global	A	29.05.13	Stable	A-1
SCOPE	A-	26.07.16	Positive	S-1



Q3 2022: Overview

Key figures

[€m]	Q3 2021	Q3 2022	Δ
Net sales	4,973	5,806	16.8%
EBITDA pre	1,552	1,810	16.7%
Margin (in % of net sales)	31.2%	31.2%	0.0pp
EPS pre	2.24	2.68	19.6%
Operating cash flow	1,467	1,552	5.8%

[€m]	Dec. 31, 2021	Sept. 30, 2022	Δ
Net financial debt	-8,753	-9,215	5.3%
Working capital	4,207	5,640	34.1%
Employees	60,335	63,713	5.6%

Comments

- Life Science and Healthcare drive EBITDA pre growth organically, further boosted by FX tailwinds
- EPS pre growth fueled by EBIT pre contribution & better financial result
- OCF* mainly powered by EBITDA pre performance, more than offsetting higher tax cash-out and higher NWC**
- Net financial debt increases, mainly due to temporary investment of excess cash, significant deleveraging vs. Q2 (~€1 bn)
- Working capital increase primarily driven by higher inventories from inflationary effects, higher safety stocks and FX effects



9M 2022: Overview

Key figures

[€m]	9M 2021	9M 2022	Δ
Net sales	14,474	16,572	14.5%
EBITDA pre	4,639	5,221	12.6%
Margin (in % of net sales)	32.0%	31.5%	-0.5pp
EPS pre	6.66	7.73	16.1%
Operating cash flow	3,571	3,244	-9.2%

[€m]	Dec. 31, 2021	Sept. 30, 2022	Δ
Net financial debt	-8,753	-9,215	5.3%
Working capital	4,207	5,640	34.1%
Employees	60,335	63,713	5.6%

Comments

- Sales up +14%, driven by strong organic performance and FX tailwinds
- Life Science fuels organic EBITDA pre growth, boosted by FX
- EPS pre growth driven by EBITDA pre contribution & better financial result
- Net financial debt increases, mainly driven by temporary investment of excess cash
- Operating cash flow decline driven by working capital (favorable phasing in LY payables and higher inventories), further amplified by FX & higher LY provisions



Q3 2022: Reported figures

Reported results

[€m]	Q3 2021	Q3 2022	Δ
EBIT	1,047	1,234	17.8%
Financial result	-54	-47	-13.2%
Profit before tax	993	1,187	19.5%
Income tax	-229	-261	13.8%
<i>Effective tax rate (%)</i>	23.1%	22.0%	-1.1pp
Net income	761	923	21.3%
EPS (€)	1.75	2.12	21.1%

Comments

- Life Science and Healthcare organic drivers of +18% EBIT growth, further boosted by favorable FX effects amid inflationary pressures
- Improved financial result primarily driven by higher interest income from buy-back of hybrid bond (€250 m)
- Effective tax rate at the lower end of guidance range
- Net income and EPS growth reflect EBIT and improved financial result



9M 2022: Reported figures

Reported results

[€m]	9M 2021	9M 2022	Δ
EBIT	3,140	3,585	14.2%
Financial result	-208	-136	-34.4%
Profit before tax	2,932	3,448	17.6%
Income tax	-673	-768	14.1%
<i>Effective tax rate (%)</i>	23.0%	22.3%	-0.7pp
Net income	2,253	2,671	18.6%
EPS (€)	5.18	6.14	18.5%

Comments

- EBIT up 14%, organically driven mainly by strong Life Science business performance
- Improved financial result primarily from ongoing repayment of liabilities and, according lower interest expense
- Effective tax rate within guidance range of ~24-22%
- Higher net income and EPS reflect higher EBIT, improved financial result



Cash flow statement

Q3 2022 – Cash flow statement

[€m]	Q3 2021	Q3 2022	Δ
Profit after tax	764	926	162
D&A	447	470	22
Changes in provisions	191	111	-80
Changes in other assets/liabilities	128	235	107
Other operating activities	18	-9	-27
Changes in working capital	-82	-181	-99
Operating cash flow	1,467	1,552	85
Investing cash flow	-638	-622	16
thereof Capex on PPE	-295	-385	-89
Financing cash flow	-1,131	-909	222

Cash flow drivers

- +21% profit after tax driven by strong performance in Life Science and Healthcare, further boosted by favorable FX and improved financial result
- Delta in changes in provisions from LY bintrafusp termination and lower LTIP¹ provision this year
- Delta in other assets & liabilities driven primarily by LY bintrafusp termination
- Delta in working capital driven primarily by inventories while receivables and payables balance out
- Higher capex on PPE driven by capacity expansion in key portfolios
- Financing cash flow reflects higher net repayment of LY financial liabilities



Cash flow statement

9M 2022 – cash flow statement

[€m]	9M 2021	9M 2022	Δ
Profit after tax	2,258	2,680	421
D&A	1,294	1,432	138
Changes in provisions	246	-41	-287
Changes in other assets/liabilities	72	34	-37
Other operating activities	40	-33	-72
Changes in working capital	-338	-828	-490
Operating cash flow	3,571	3,244	-327
Investing cash flow	-1,226	-2,497	-1,271
thereof Capex on PPE	-860	-1,051	-192
Financing cash flow	-2,184	-1,057	1,127

Cash flow drivers

- +19% profit after tax growth driven by strong business performance in Life Science, further boosted by favorable FX and improved financial result
- Delta in changes in provisions from lower LTIP¹ and last year's litigation provisions
- Delta in working capital driven by Q1 payables phasing (~ +€300 m in Q1 2021) and higher inventories from inflationary effects, higher safety stocks and goods in transit
- Higher investing cash flow reflects Exelead acquisition and temporary investment of excess cash
- Financing cash flow impacted primarily by new bond issuance



Adjustments in Q3 2022

Adjustments in EBIT

[€m]	Q3 2021		Q3 2022	
	Adjustments	thereof D&A	Adjustments	thereof D&A
Life Science	18	0	41	0
Healthcare	9	0	29	0
Electronics	38	18	18	10
Corporate & Other	11	1	30	0
Total	76	19	118	11

Adjustments in 9M 2022

Adjustments in EBIT

[€m]	9M 2021		9M 2022	
	Adjustments	thereof D&A	Adjustments	thereof D&A
Life Science	26	0	78	1
Healthcare	30	3	124	91
Electronics	65	25	40	11
Corporate & Other	114	1	67	0
Total	235	30	309	103

Changes in FX rates impact top and bottom line

Sensitivities* of top 2 foreign currencies - Group, unhedged

	Deviation	Impact
US \$	0.01 U.S. Dollar appreciation versus Euro	Group Sales: increase by ~€55 m Group EBITDA: increase by ~€20 m
CNY ¥	0.1 Chinese Yuan Renminbi appreciation versus Euro	Group Sales: increase by ~€35 m Group EBITDA: increase by ~€25 m

Currency management

- Exposure from booked revenues and invoices, receivables and liabilities, are hedged 100%
- Exposure from planned revenues hedged on a 12 month rolling basis
- Basic hedge ratio: ~ 40% (to max. ~90% depending on risk KPIs)
- Forward contracts and options being used
- Cost of hedges reflected in financial result
- Economic hedging impact reflected in EBITDA pre of Corporate / Other

*Company estimates based on FX rates and currency exposure in 2021; FX sensitivities are calculated on a FY basis

Financial Calendar

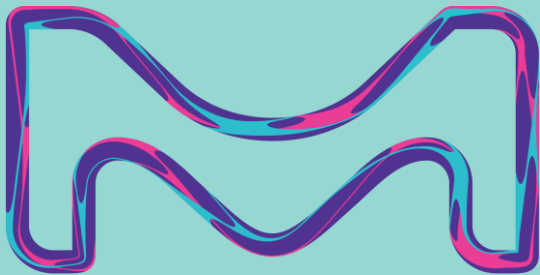


Date	Event
March 2, 2023	Q4 2022 Earnings release
April 28, 2023	Annual General Meeting
May 11, 2023	Q1 2023 Earnings release
August 3, 2023	Q2 2023 Earnings release
November 9, 2023	Q3 2023 Earnings release



Life science

Appendix

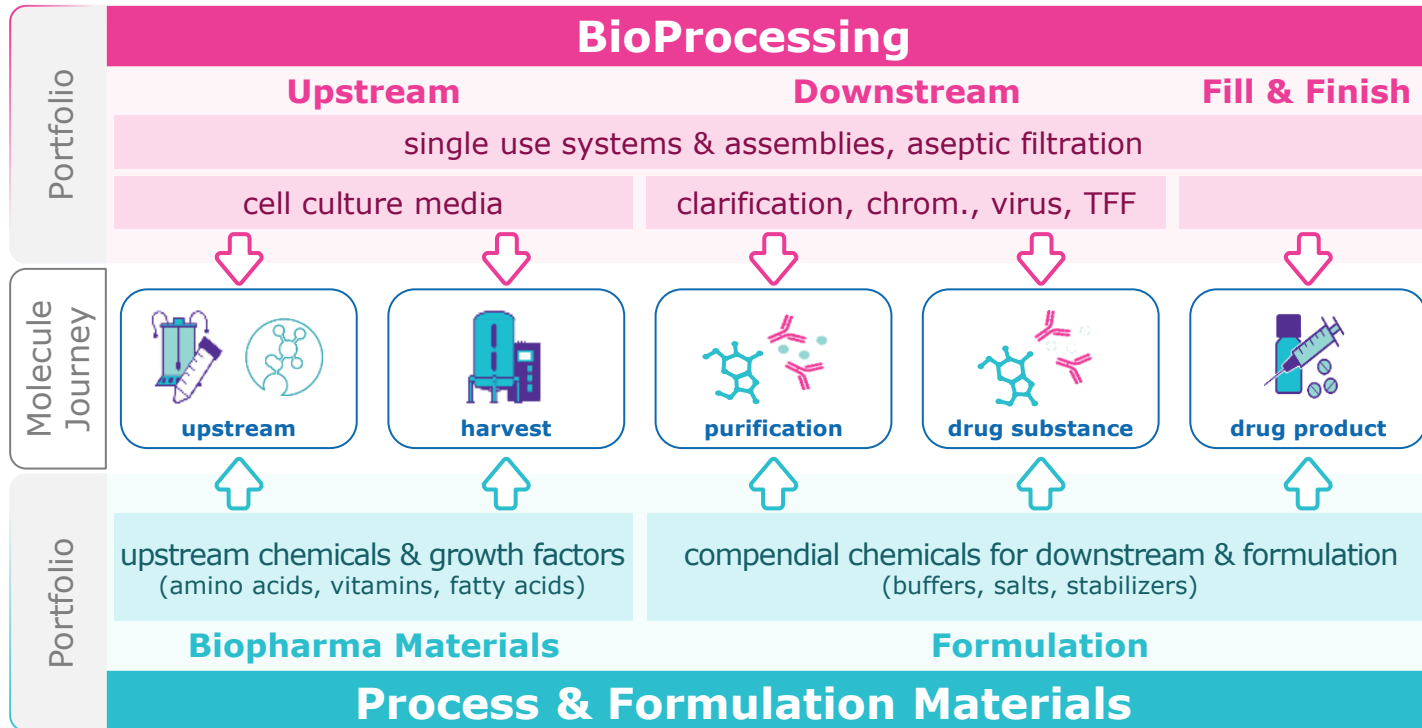


Process Solutions – Business Overview

Comprehensive product portfolio and diversified customer base

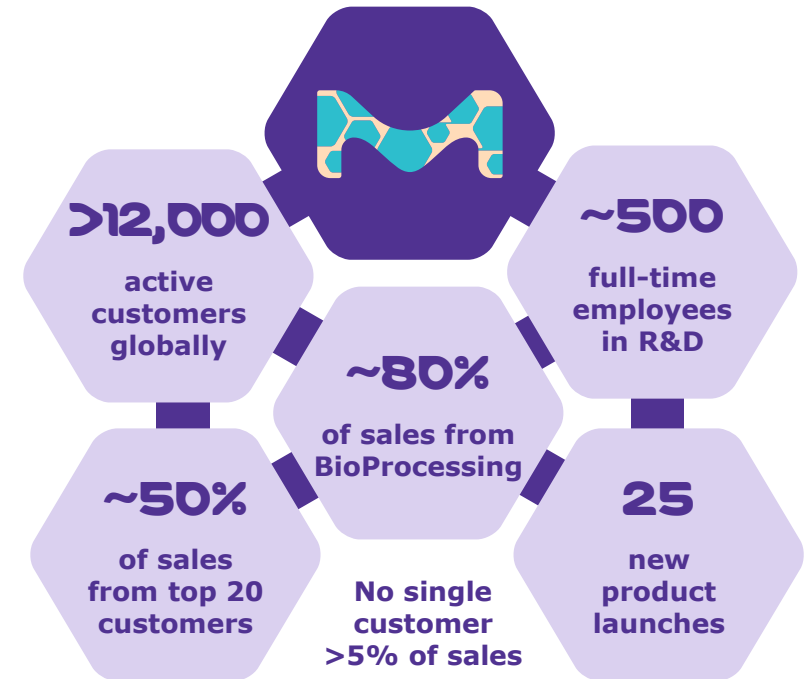
Portfolio

Addressing full value chain from upstream to drug product



Snapshot

Business in numbers¹



Leading product portfolio for bioprocessing operations, novel templates, chemicals, and formulation materials serving wide range of biopharma customers

¹ Based on H1 2022 except product launches based on 2021; Acronyms: chrom. = chromatography, TFF = Tangential Flow Filtration

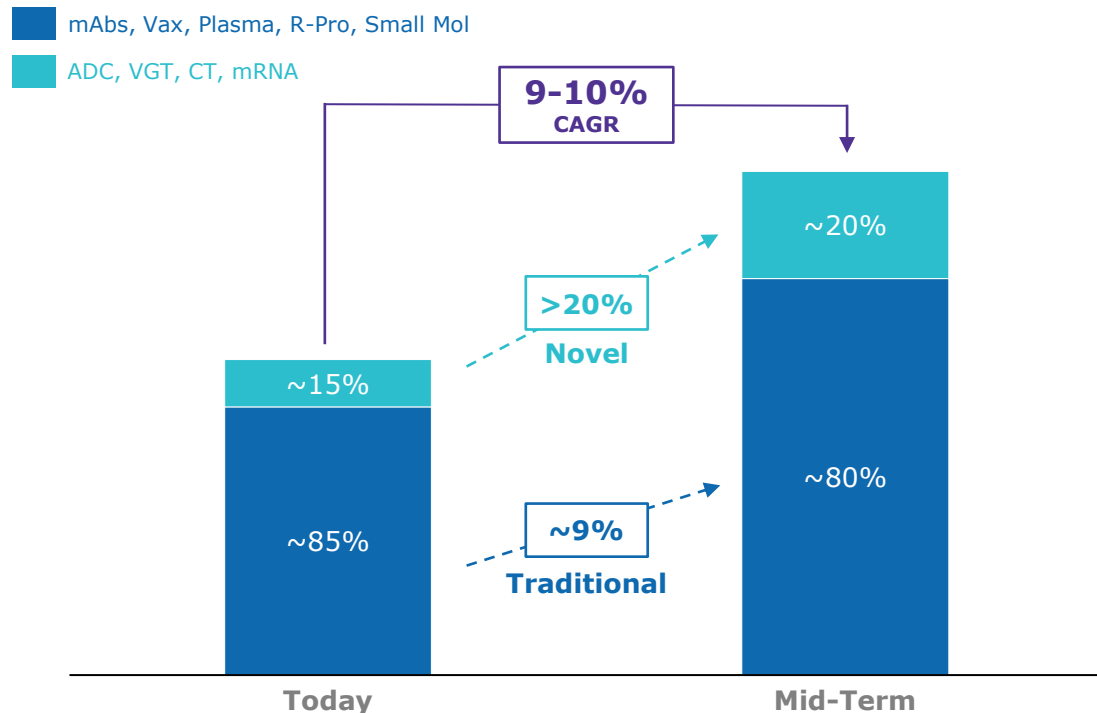


Process Solutions – Market

Participating in the attractive biopharma market

Novels driving growth

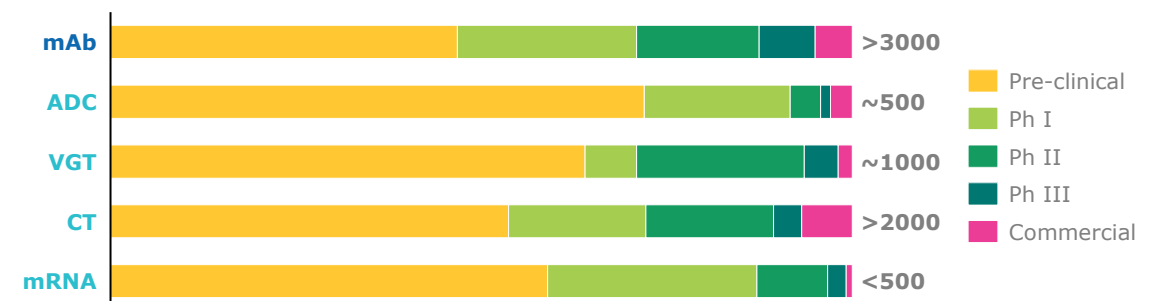
Process products market in € bn (excl. COVID-19)



Diversified customer base

By type, geography, modality

- Customer split**
Emerging biotechs increasing asset¹ ownership
- Geography**
China regulatory environment maturing
- Pipeline & on-market**
Deep pre-clinical funnel in multiple modalities



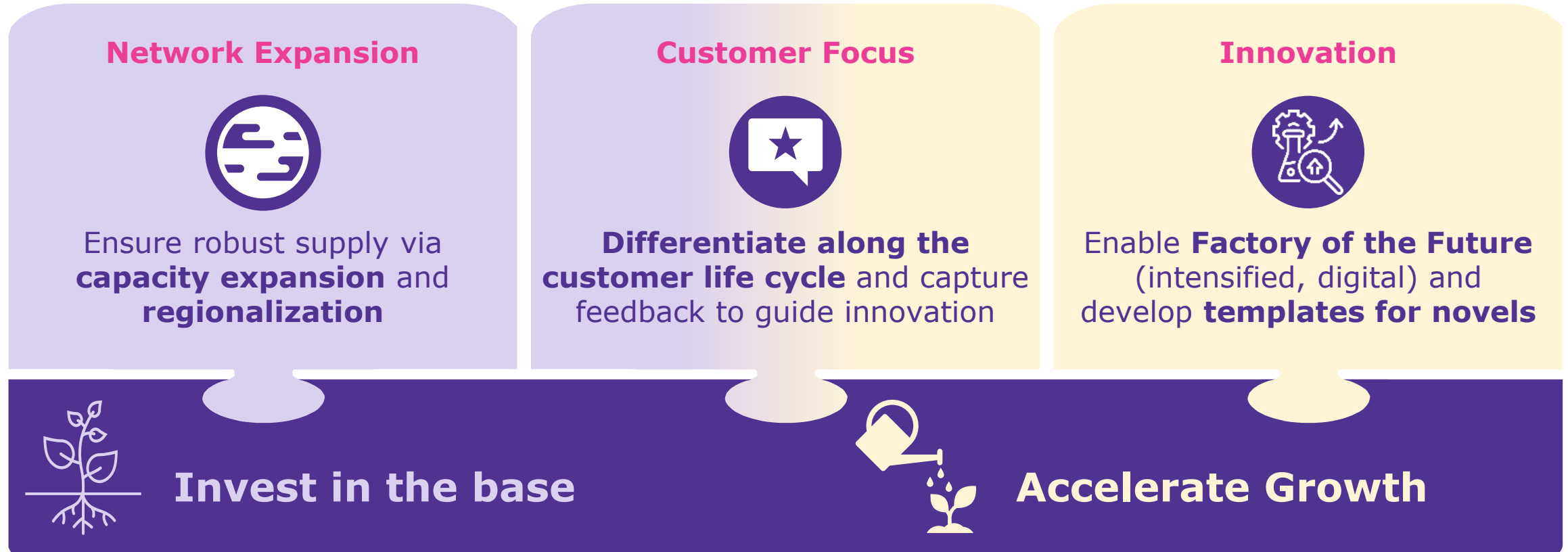
Attractive market dominated by traditional modalities with higher growth expected in novel modalities amid structural trends and strong pipelines

Source: internal market models, Evaluate Pharma; ¹ Refers to pipeline assets; Acronyms: mAbs = monoclonal Antibodies, Vax = Vaccines, R-Pro = Recombinant Protein, mol = molecule, ADC = Antibody Drug Conjugate, VGT = Viral Gene Therapy, CT = Cell Therapy, mRNA = messenger Ribonucleic Acid, Ph = phase



Process Solutions – Strategy

Positioning the business to secure leadership as the market evolves



Network expansion, customer focus, and innovation as **key levers to drive growth**

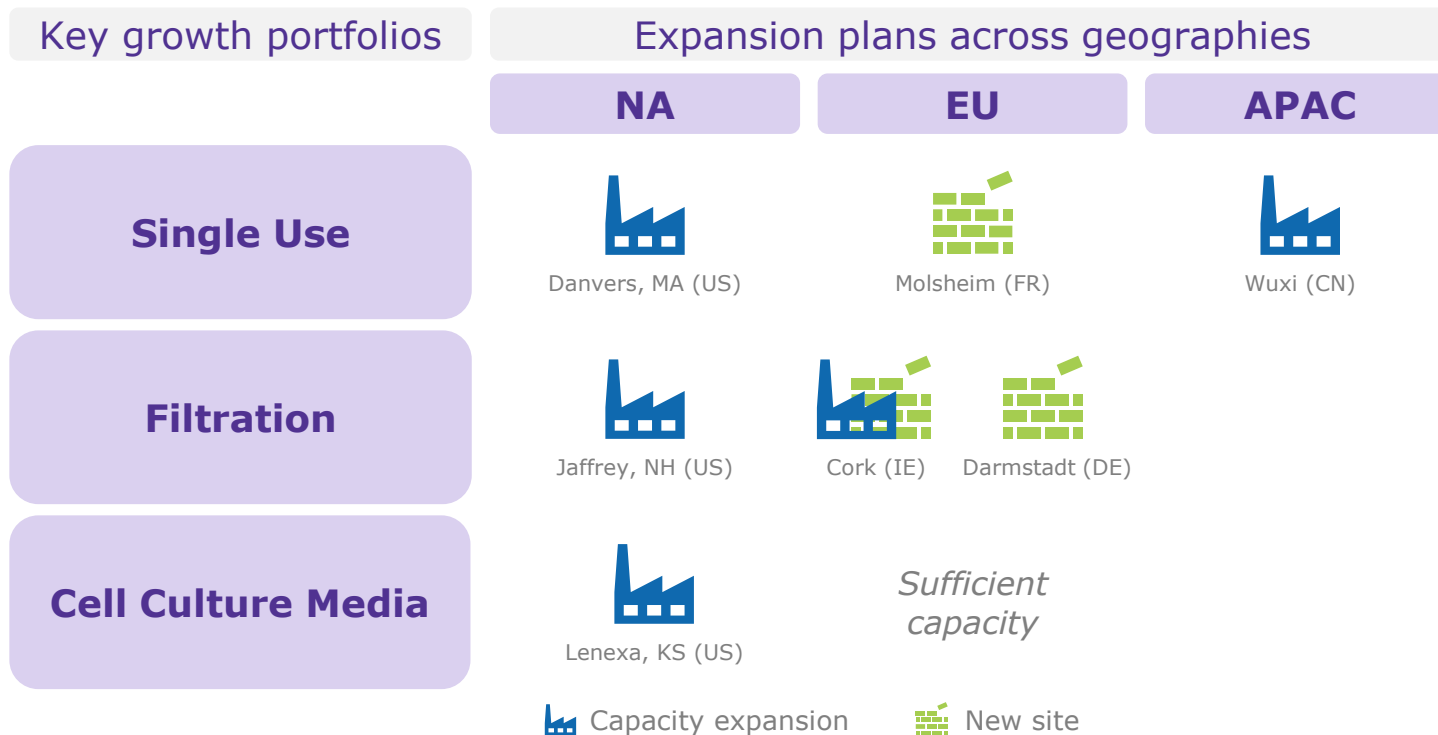
Process Solutions – Network Expansion

Investing >€700 m¹ to increase capacity and create regional network

Guiding principles

-  **Increase capacity**
-  **Expand regionally**
-  **Mitigate geopolitical risks**
-  **Streamline logistics**

Investing to expand global network



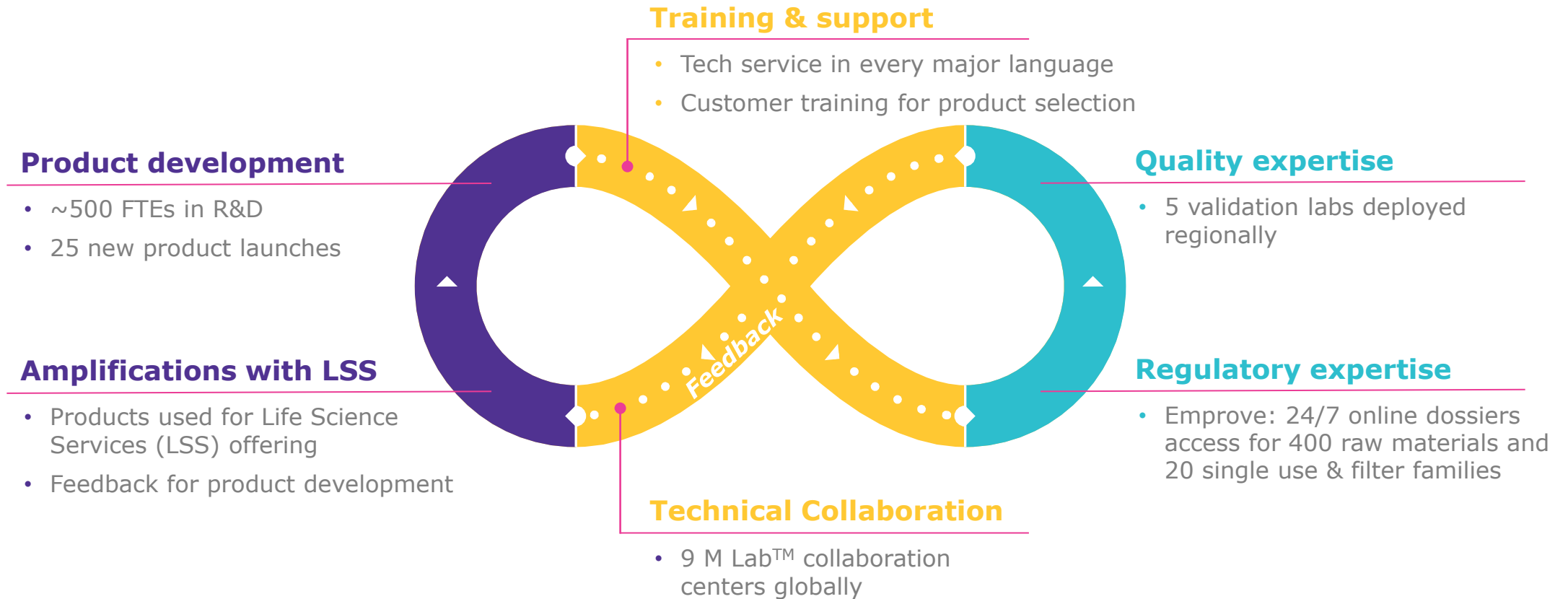
 **Capacity additions fueling growth of key portfolios, manufacturing lead times improving**

¹ Publicly announced capacity expansions since early 2021



Process Solutions – Customer Focus

Differentiating along the customer life cycle and capturing feedback to guide innovation



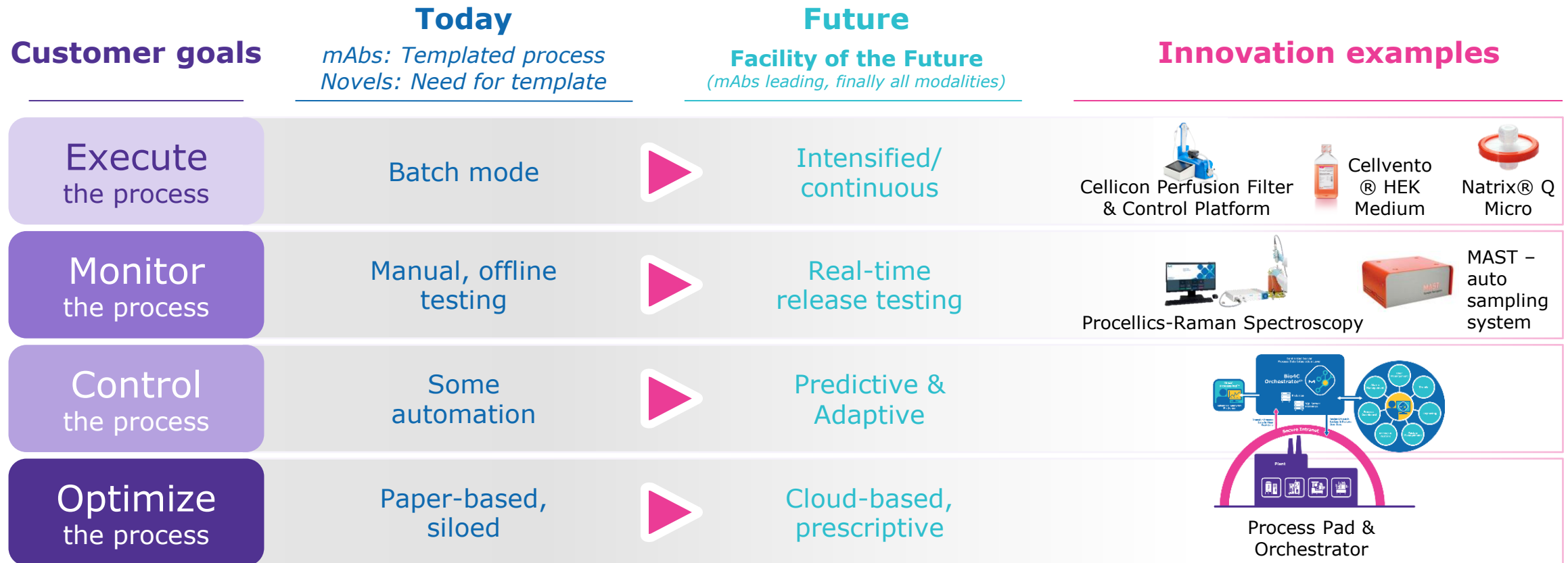
Holistic customer engagement an important cornerstone to **continued success** in a **dynamic market environment**

All data based on H1 2022 except product launches based on 2021



Process Solutions – Innovation

Enabling customers' transformation towards Factory of the Future



Cutting-edge innovation amplified by technology bolt-ons and partnerships paving the way towards sustained leadership

Acronyms: mAbs = monoclonal Antibodies, HEK = Human Embryonic Kidney

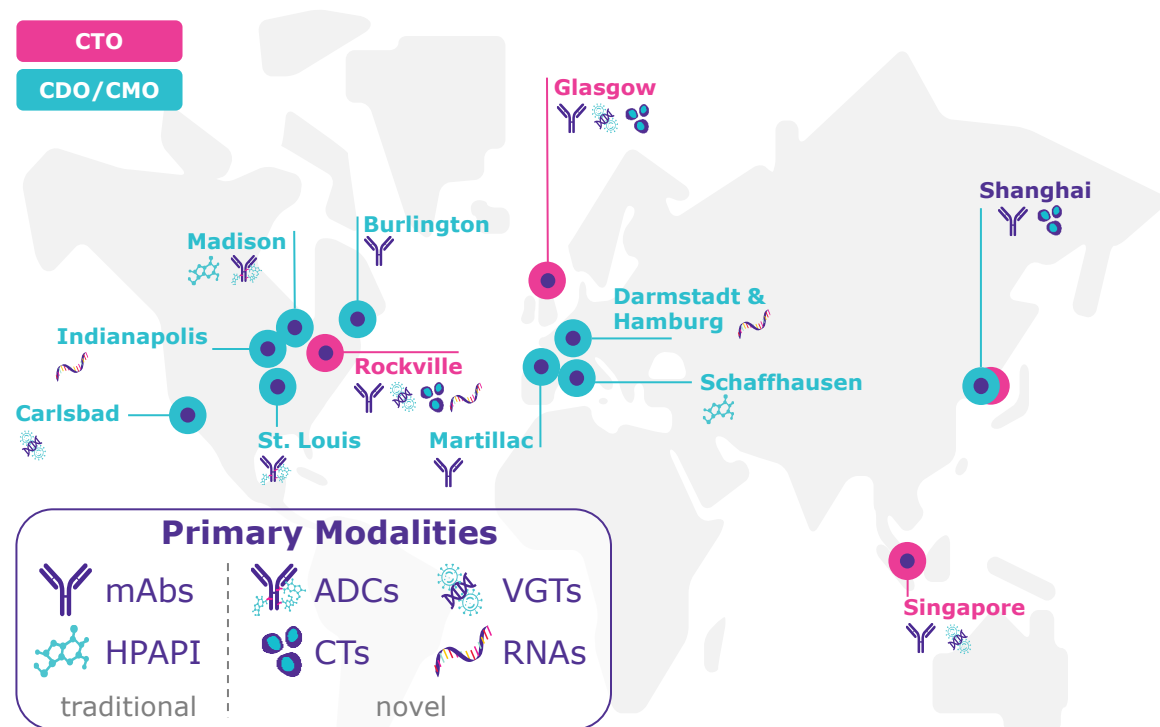


Life Science Services – Footprint and Capabilities

Global network with the ability to offer services across all stages of the molecules value chain

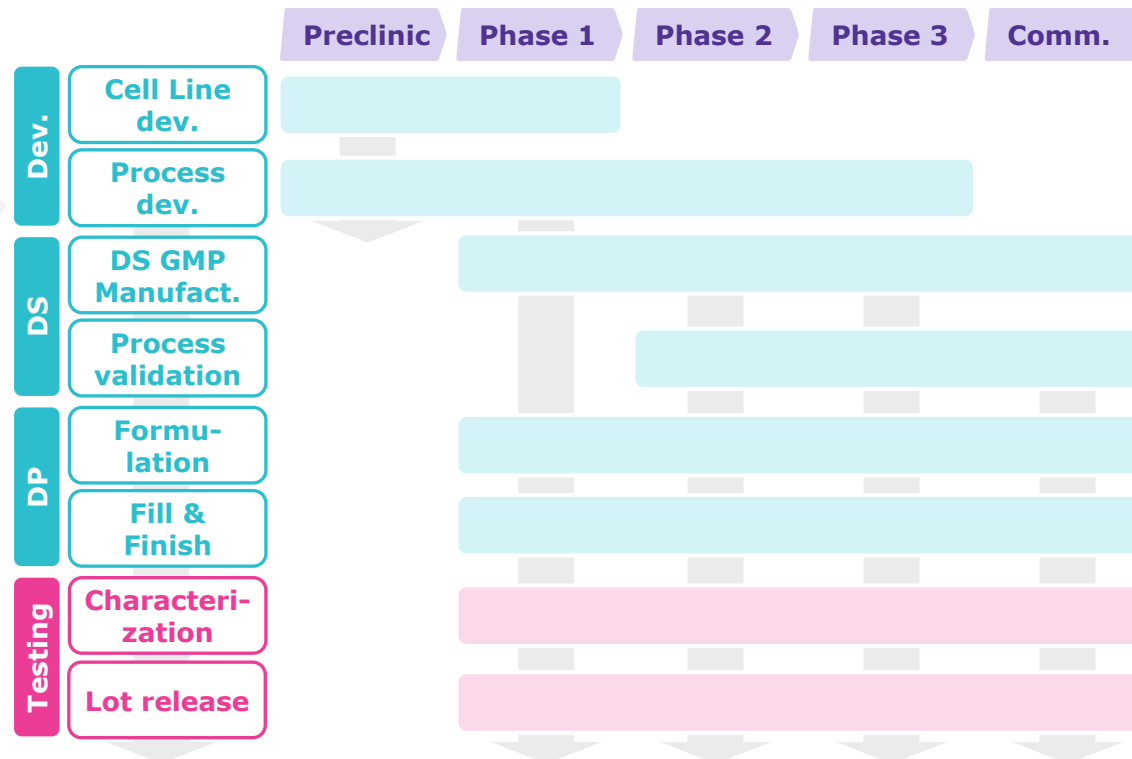
Global footprint

Overview of current CTDMO network



Service offering

Overview of services across the molecules value chain



Global CTDMO network with presence across key growth markets, offering scalable solutions and differentiated services across six modalities

Acronyms: CTO = Contract Testing Organization, CDO = Contract Development Organization, CMO = Contract Manufacturing Organization, CTDMO = Contract Testing Development Manufacturing Organization, mAbs = monoclonal Antibodies, HPAPI = High Potency Active Pharmaceutical Ingredient, ADCs = Antibody Drug Conjugates, CTs = Cell Therapies, VGTs = Viral Gene Therapies, RNAs = Ribonucleic Acids, Dev. = Development, DS = Drug Substance, GMP = Good Manufacturing Practice, DP = Drug Product, Comm. = Commercial









Life Science Services – Business Overview

A multi-modality service offering across traditional and novel modalities

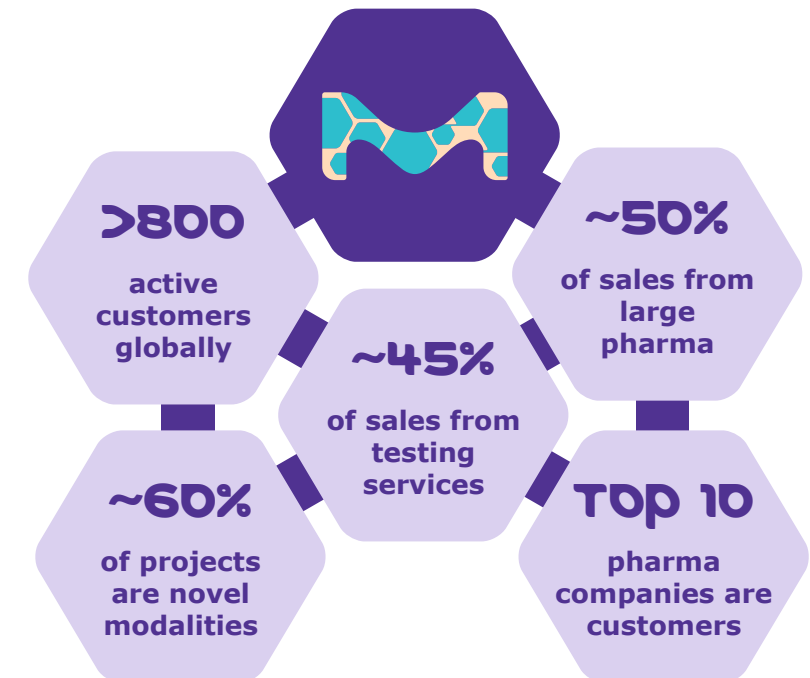
Capabilities

Serving customers along their molecule journey

	CDMO			CTO	Focus	Value proposition
	Dev.	DS	DP	Testing		
 Small molecules	✓	✓			Complex and high potent	Flow chemistry and highly potent synthesis
 mAbs	✓	✓		✓	Single use molecules	Template speed and flexibility in single use
 ADCs	✓	✓		✓	Potent conjugates	Integrated supplier: payload to conjugation
 VVs	✓	✓	✓	✓	All virus types	Capacity and scale, with full service offering
 mRNA	✓	✓	✓	✓	mRNA	One-stop shop and technical track record
 CTs				✓	All cell types	Capacity and expertise across cell types

Snapshot

Business in numbers¹



Well established CTO with comprehensive service offering and emerging CDMO focused on selected growth pockets with unique value proposition

✓ Available ✓ Limited Services ¹ Based on H1 2022 Acronyms: CTO = Contract Testing Organization, CDMO = Contract Development Manufacturing Organization, Dev. = Development, DS = Drug Substance, DP = Drug Product, mAbs = monoclonal Antibodies, ADCs = Antibody Drug Conjugates, VVs = Viral Vectors, mRNA = messenger Ribonucleic Acid, CTs = Cell Therapies

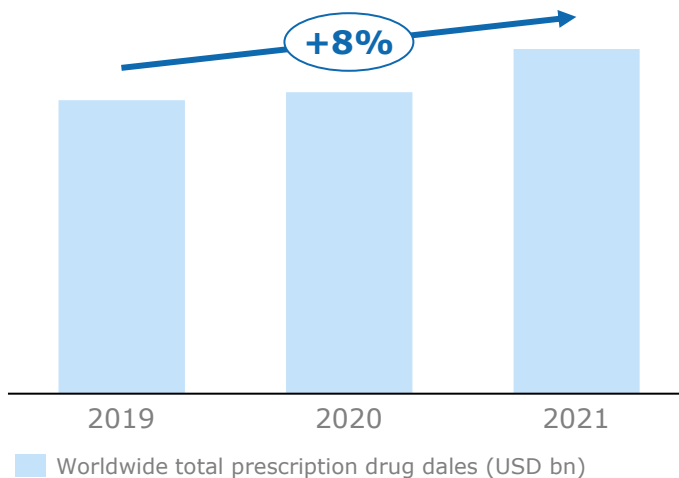


Life Science Services – Market

Growing end-market with emerging biotechs driving the increasing pipeline of novel modalities

Pharma market

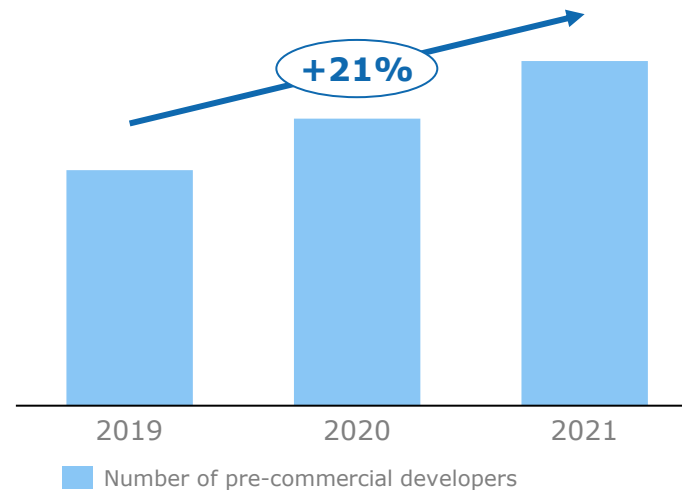
Pharmaceutical market:
growing steadily at 8%



High single-digit growth expected to continue until 2026

Customer type

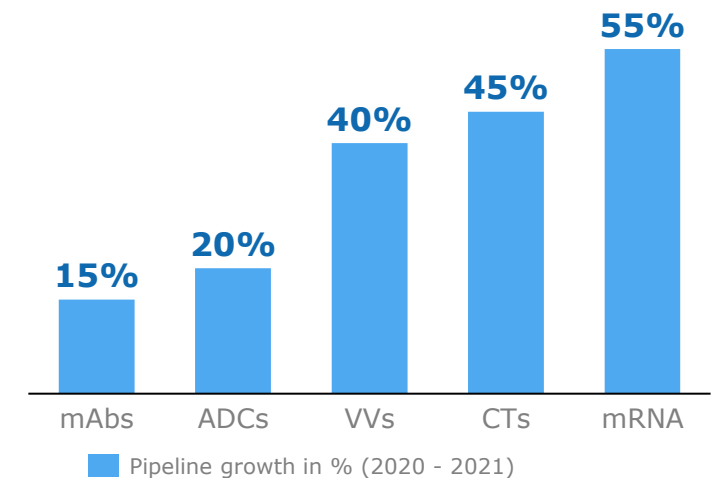
of customers: emerging biotechs growing fast and driving the pipeline



Rising number of emerging biotechs with typically limited inhouse capabilities

Novel modalities

of molecules: pipeline of novel outgrowing traditional modalities



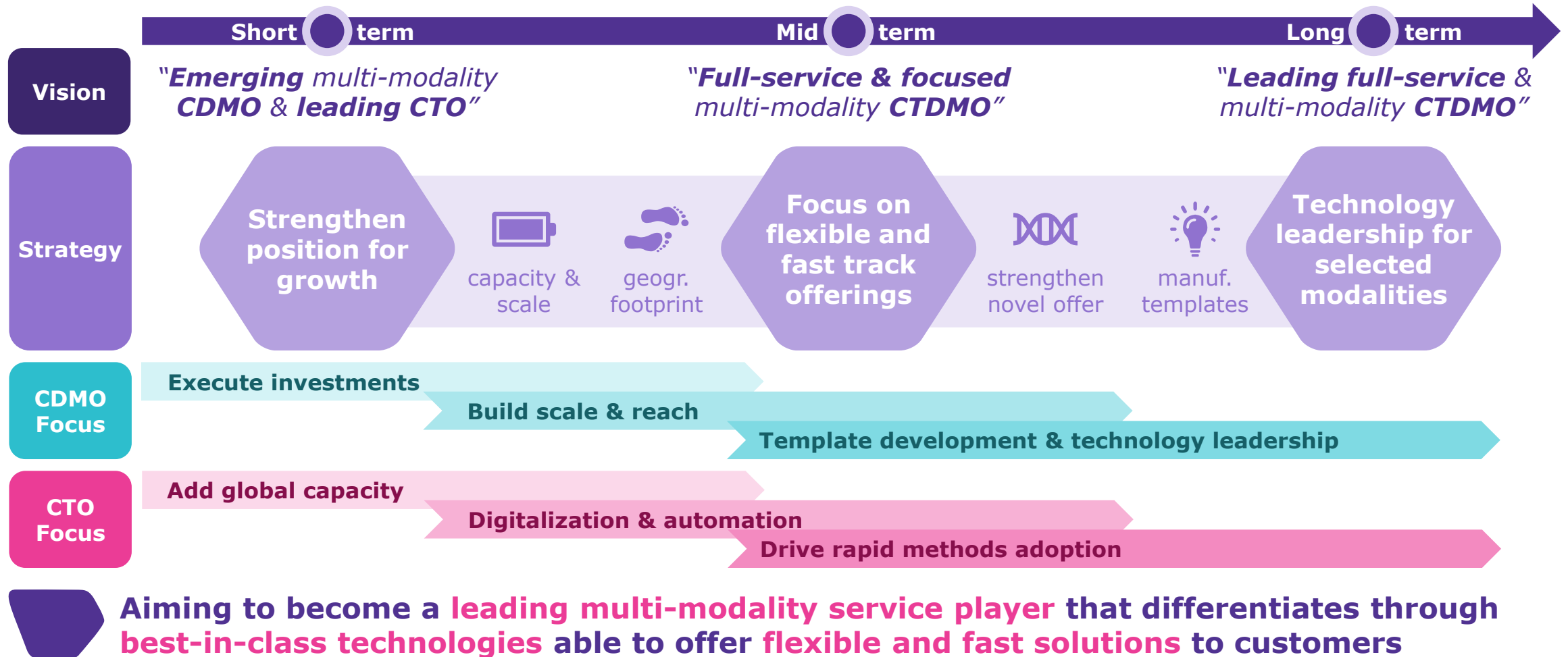
Lack of standard templates for novel modalities drives outsourcing needs

Sources: Left: Evaluate Pharma – World Preview 2021 Outlook to 2026; Middle: Evaluate Pharma 2022 pipeline data; Right: Evaluate Pharma custom pipeline database



Life Science Services – Ambition

Existing business the foundation for growth, ambition based on technology leadership across modalities

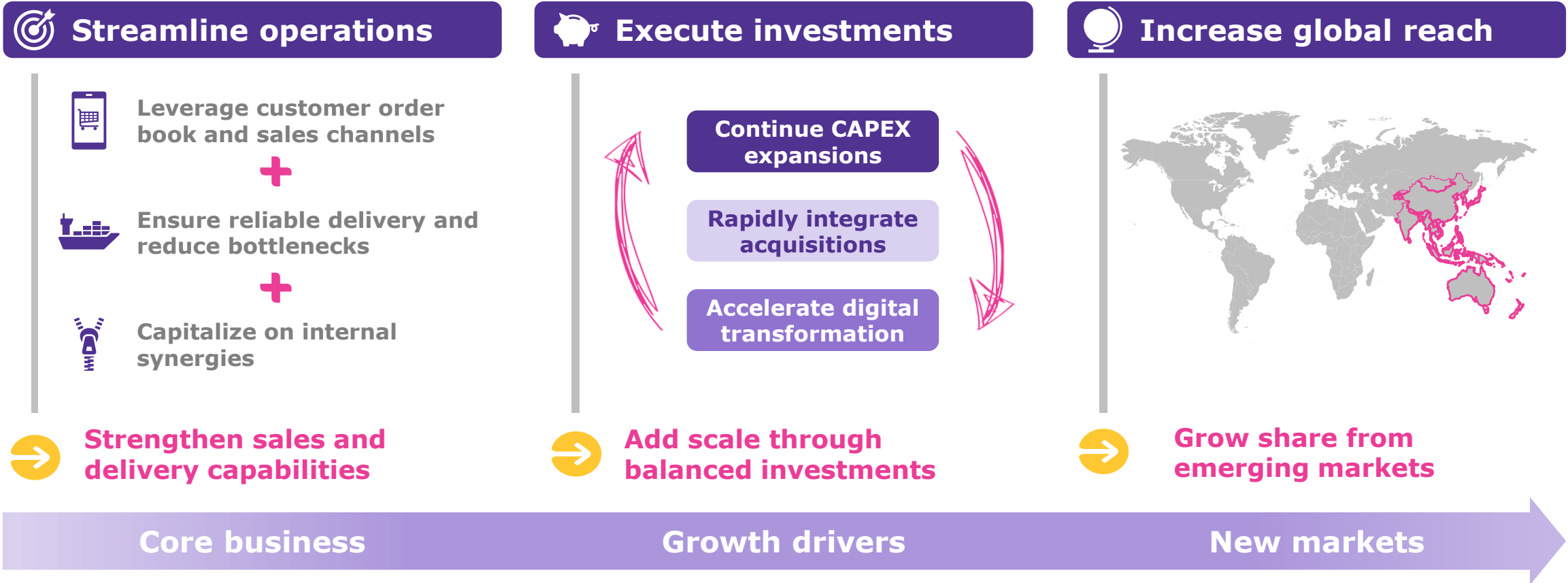


Acronyms: CDMO = Contract Development Manufacturing Organization, CTO = Contract Testing Organization, CTDMO = Contract Testing Development Manufacturing Organization



Life Science Services – Priorities

Focusing on operations, investments and new markets to strengthen our position for growth

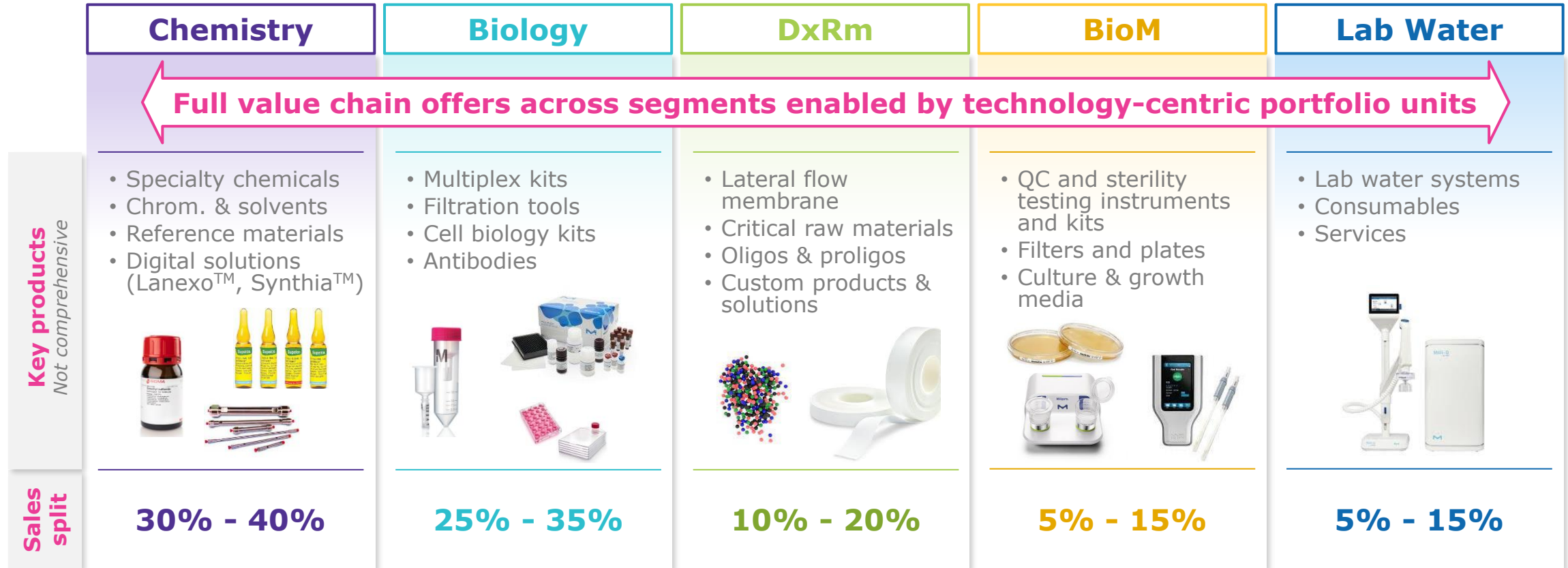


Execution of **strategic priorities** critical to advance on roadmap for **robust growth**



Science & Lab Solutions – Portfolio

Broad portfolio consisting of five specialized portfolio units and franchises enabling a presence across workflows



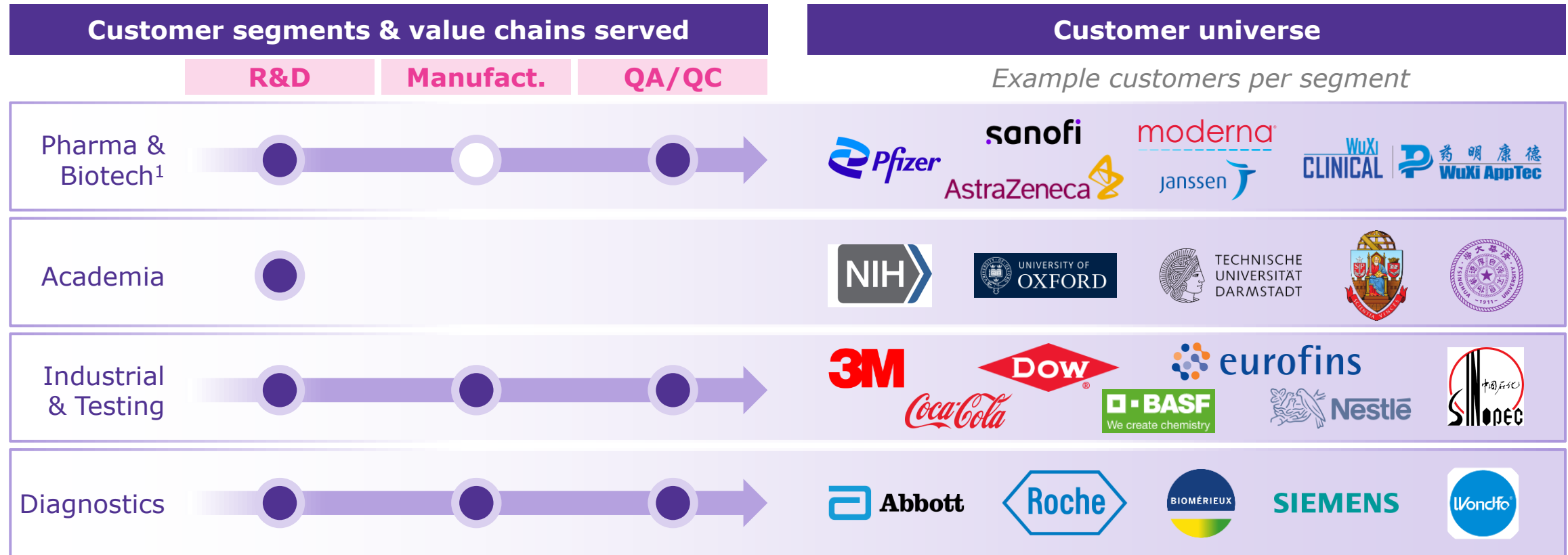
Trusted, innovative brands with podium positions – driven by high-quality, customer- and application-focus, and deep sales expertise

Acronyms: DxRm = Diagnostics & Regulated Materials, BioM = Biomonitoring, Chrom. = Chromatography, QC = Quality Control



Science & Lab Solutions – Customers and Value Chains

Serving full value chains of diverse customer segments with key customers including global leaders in their fields



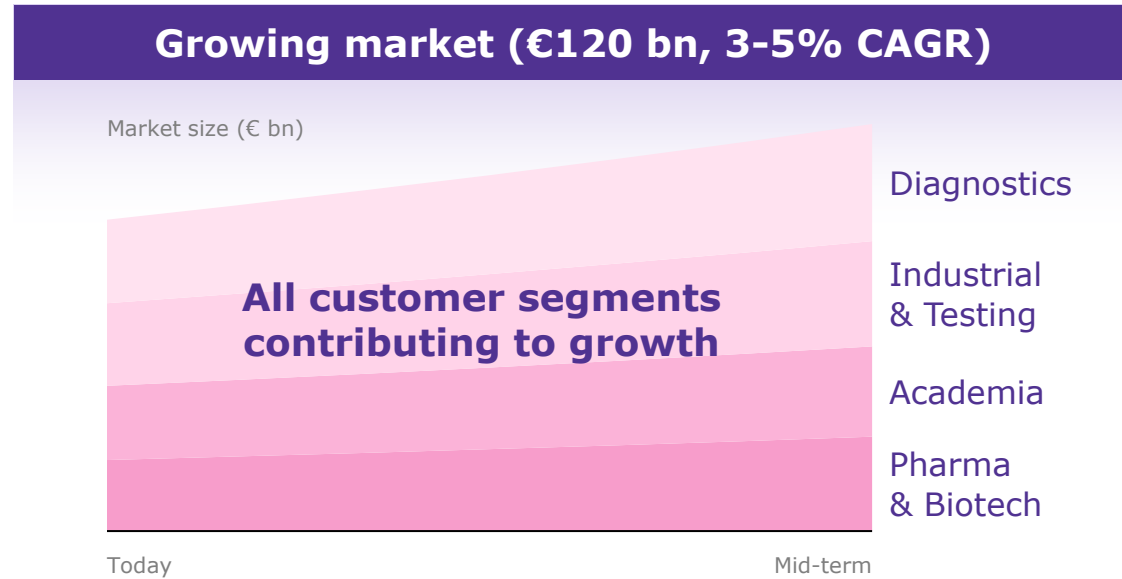
Innovative portfolio and broad footprint enabling to serve customers across value chains meeting needs of leading companies and organizations

¹ Biopharma manufacturing applications addressed by Process Solutions and Life Science Services; Acronyms: R&D = Research & Development, QA/QC = Quality Assurance/Quality Control



Science & Lab Solutions – Market and Performance

Serving a large, resilient and growing market – delivering stable revenue performance



Selected Drivers



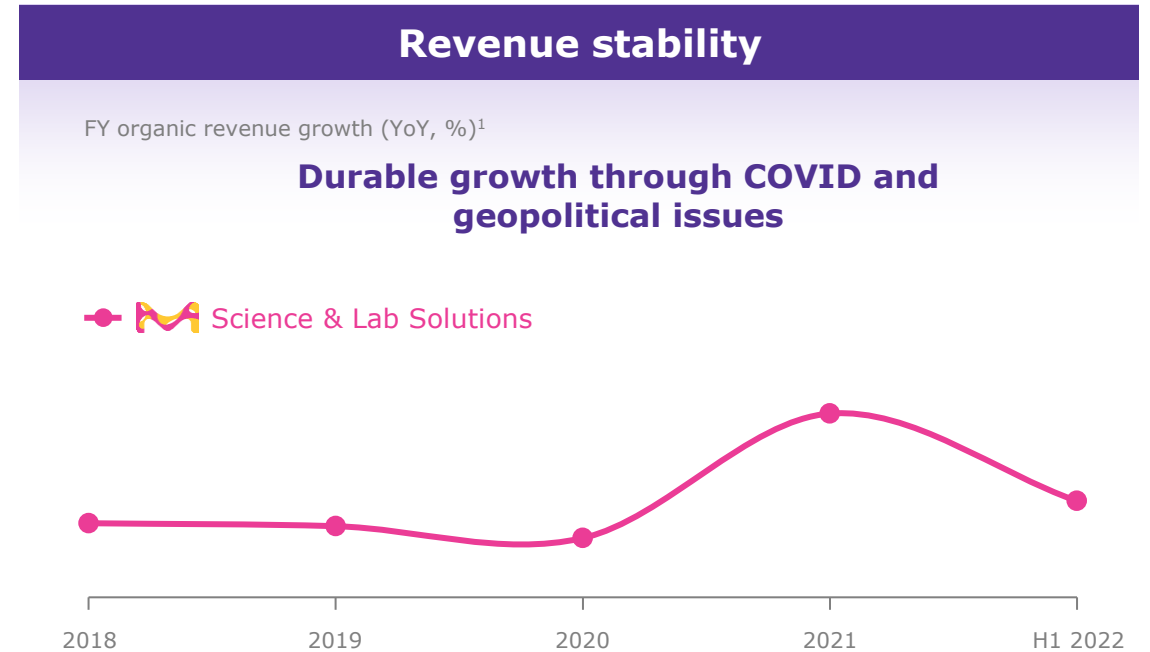
Growing, aging population & healthcare needs



Increasing regulatory stringency



Digitalization & Automation of lab operations



Slow EU & China tariffs

COVID impact

COVID recovery

COVID shift to endemic



















Serving diverse, attractive customer segments with robust growth from secular drivers protects from market shocks, fostering reliable organic growth

¹ 2018-21 growth rates based on weighted average of former Research Solutions and Applied Solutions business units



Science & Lab Solutions – Key Trends and Initiatives

Addressing key industry & macroeconomic trends with innovative solutions and targeted investments

Secular trends	Industry trends			Macroeconomic trends		
	 Digitalization & Automation	 Regulatory stringency	 Sustainability across value chain	 Population growth & ageing	 Localization in emerging mkts.	 persistent high inflation
SLS offering & plans	 Solutions automating QA/QC & improving lab productivity 	 Broad QA/QC portfolio and high-quality raw materials 	 Integration of sustainability into all products & operations 	 Investment in capacity to meet demand across portfolios 	 Balanced global footprint; regional growth initiatives 	 Reputation & quality support price increases; synergies contain costs 
Most relevant customer segments	Pharma & Biotech Industrial & Testing	Pharma & Biotech Diagnostics	All segments	All segments	All segments	All segments



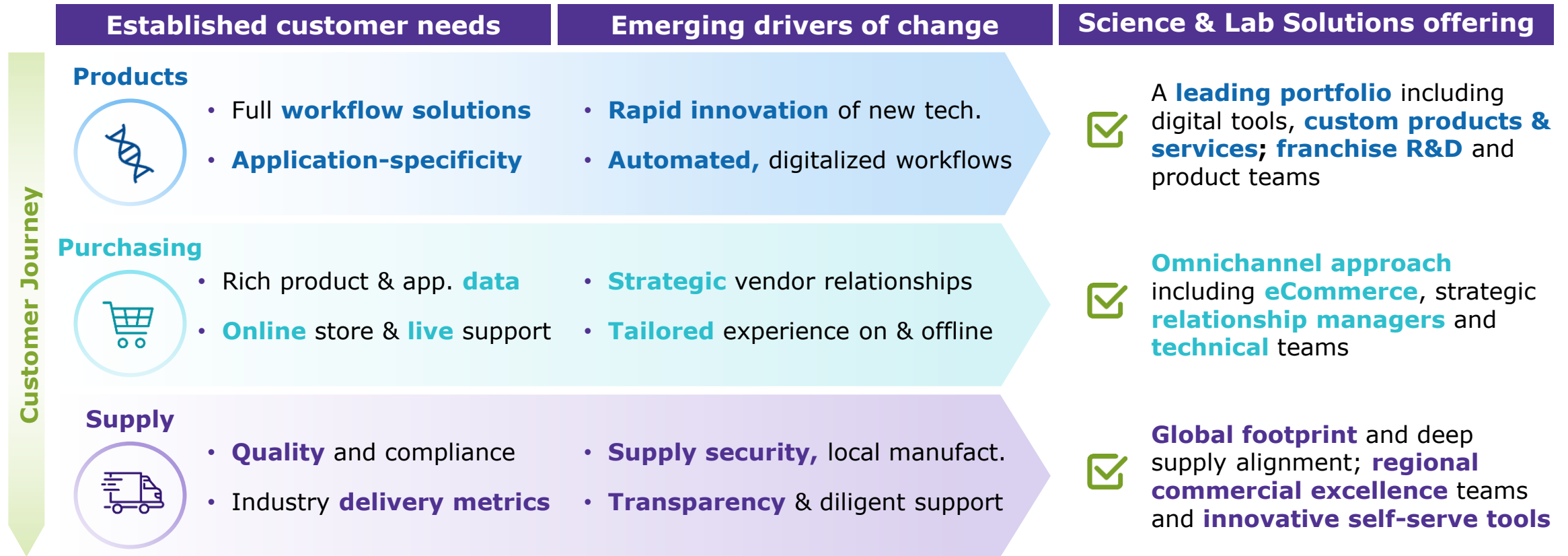
Well positioned to **deliver durable growth** in a changing market environment

Acronyms: SLS = Science & Lab Solutions, QA/QC = Quality Assurance/Quality Control



Science & Lab Solutions – One-Stop Shop Approach

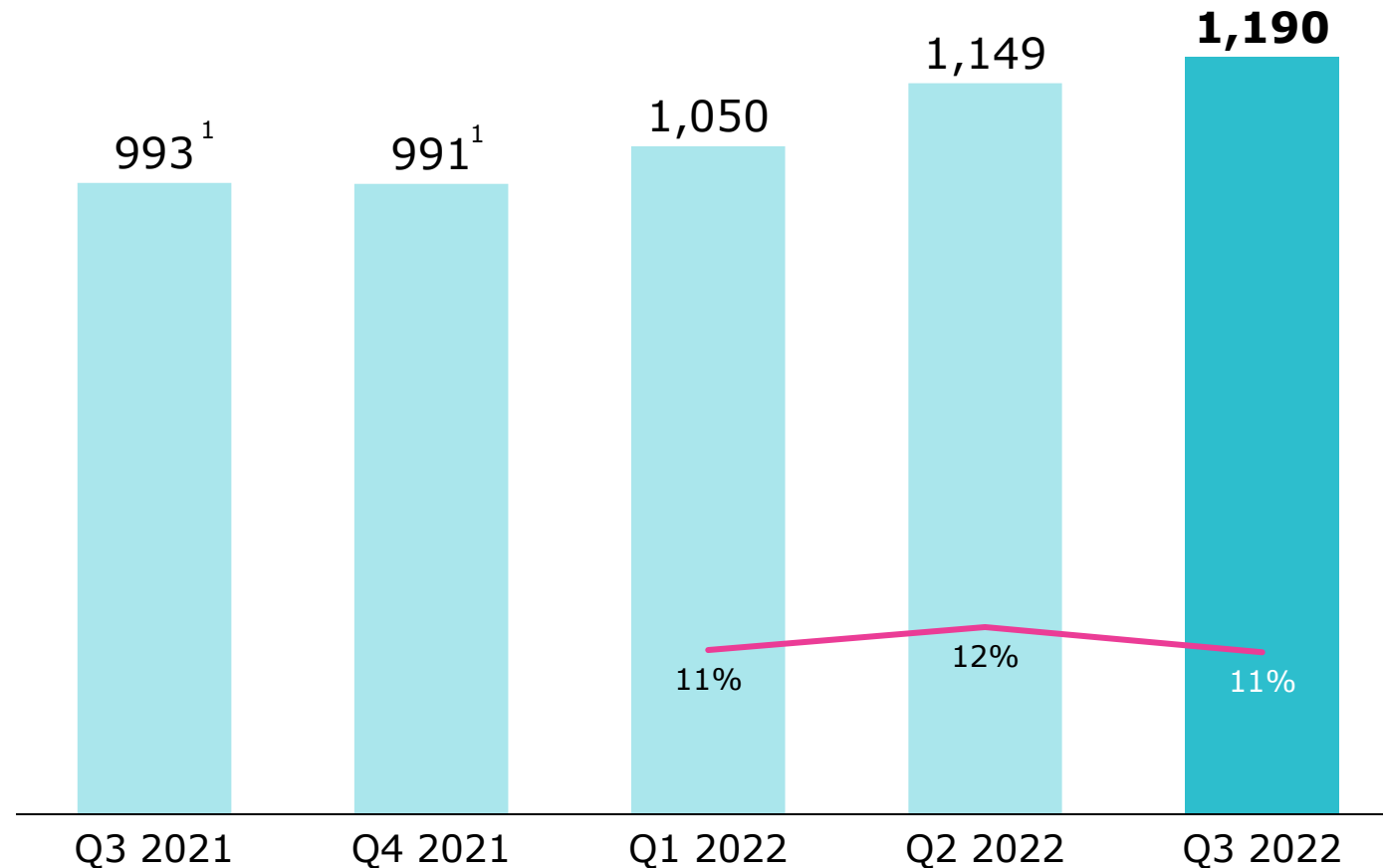
Holistic offering to meet customer needs on their journey



Well equipped to delight customers and strengthen position further

Process Solutions: Double-digit growth despite fading COVID-19 demand

Sales development [€m] - org. growth [%]



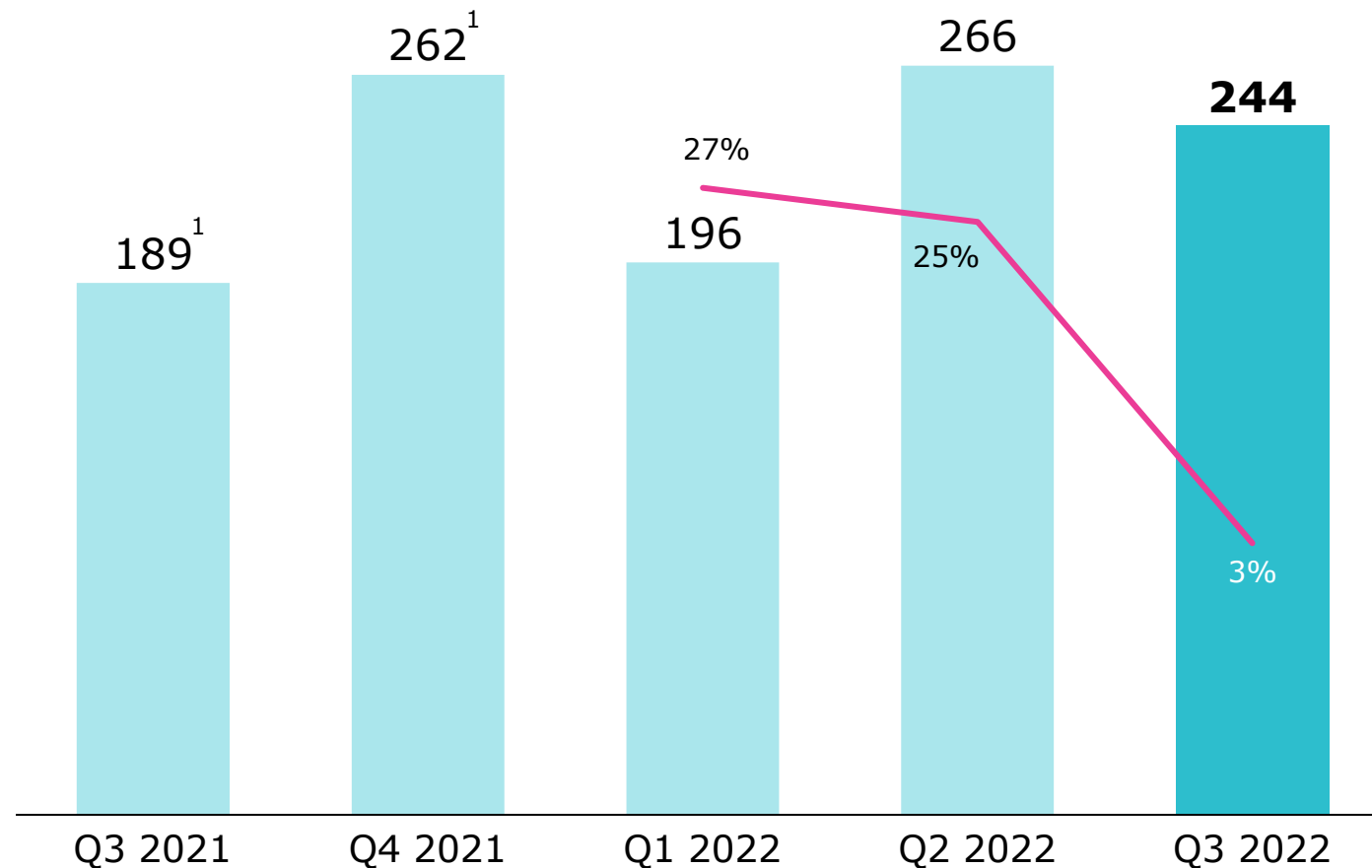
- **Further acceleration of core business** (+31%) drives double-digit organic sales growth in Q3
- As expected, **COVID-19 sales significantly down YoY**, sequentially about stable
- **Core business expected to normalize in Q4 and into next year**, with COVID-19 related business still declining
- **Strong growth in Bioprocessing** more than offsetting decline in Process & Formulation Materials (due to COVID-19)
- Sales up sequentially amid **ongoing capacity expansions; lead times improving further**
- **All regions growing** with NA as main growth driver, followed by Europe
- Order intake declining against tough comps and **book-to-bill slightly below 1, order book remains healthy**

¹2021 figures have been adjusted owing to the reorganization of the LS business sector as well as to product reallocations between the Life Science and Electronics business sectors.



Life Science Services: Near-term volatility but mid-term prospects intact

Sales development [€m] - org. growth [%]



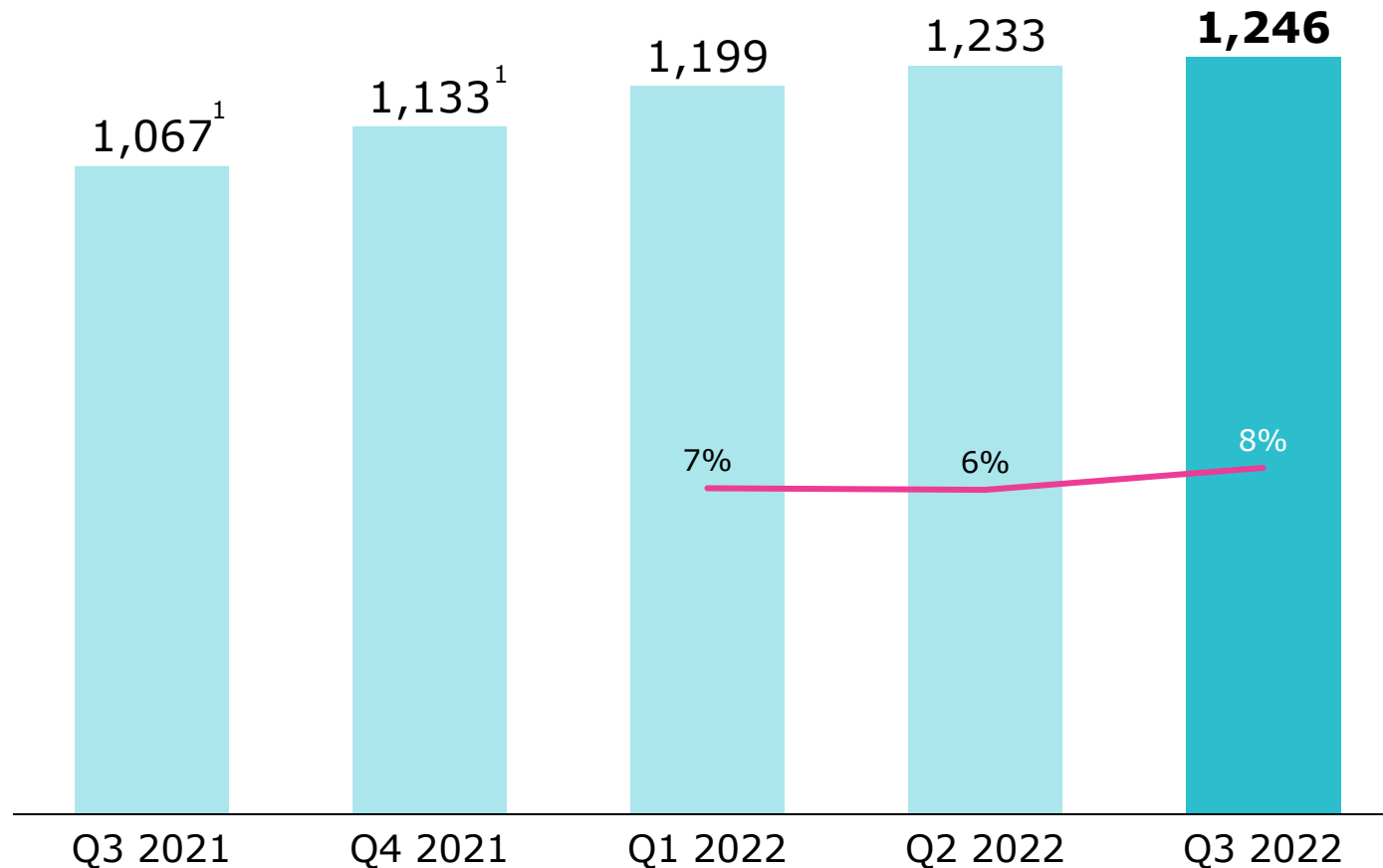
- **Core business down** in Q3 amid tough comps and **near-term volatility in CDMO**, esp. unfavorable batch phasing and attrition in clinical pipelines of customers
- **COVID-19 business growing** YoY and also up QoQ due to order phasing
- **Double-digit growth in contract testing** more than offsetting temporary revenue dip in CDMO
- **CDMO mid-term prospects remain compelling** despite near-term volatility, supported by dynamic early-stage customer wins
- **Almost all regions growing** with NA as largest contributor to growth

¹2021 figures have been adjusted owing to the reorganization of the LS business sector as well as to product reallocations between the Life Science and Electronics business sectors.



Science & Lab Solutions: Strong and broad-based growth continuing

Sales development [€m] - org. growth [%]



- **Strong core business** drives high single-digit growth in Q3, supported by pricing and slight pull-forward effects ahead of pricing round
- **COVID-19 business waning**, down YoY and QoQ amid lower diagnostics demand
- **Positive pricing** and **strong operational performance** across the board
- Almost all franchises growing; **double-digit growth in BioMonitoring and Lab Water**
- **Growth in all regions** with APAC as key driver, supported by China recovery

¹2021 figures have been adjusted owing to the reorganization of the LS business sector as well as to product reallocations between the Life Science and Electronics business sectors.



Life Science Q3: Core business (+16% org.) as key growth driver fueled by strong underlying demand and ongoing capacity expansions

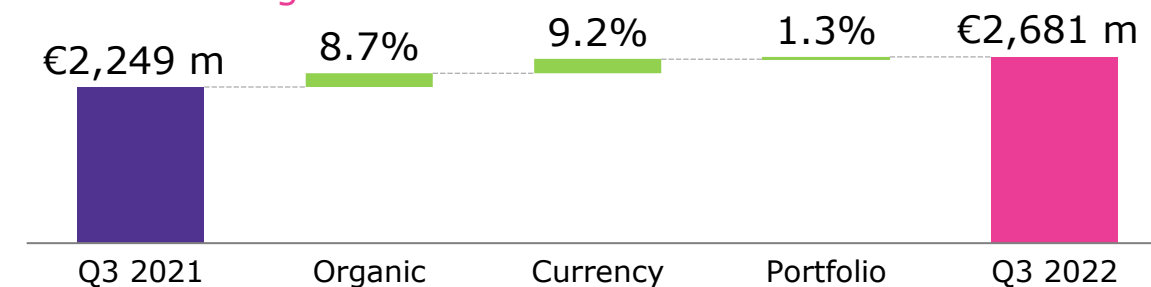
Life Science P&L

[€m]	IFRS		Pre	
	Q3 2021	Q3 2022	Q3 2021	Q3 2022
Net sales	2,249	2,681	2,249	2,681
M&S*	-529	-634	-527	-629
Admin	-93	-112	-84	-102
R&D	-88	-106	-88	-106
EBIT	614	719	632	760
EBITDA	806	936	-	-
EBITDA pre	824	976	824	976
(in % of net sales)	36.6%	36.4%	36.6%	36.4%

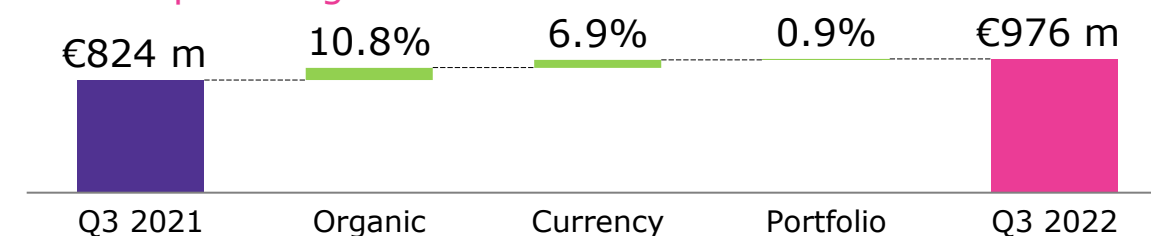
Comments

- Process Solutions: +11% org. growth, driven by excellent core business performance (+31%), esp. bioprocessing with lead times improving further; COVID-19 business declining as anticipated vs. tough comps
- Science & Lab Solutions: growing +8% org. across majority of the portfolio, supported by positive pricing and slight pull-forward effects
- Life Science Services: +3% org. growth amid tough comps and near-term volatility, while mid-term prospects remain fully intact
- M&S about stable as a % of sales despite steep increases in logistics costs; excluding logistics, M&S growing significantly below sales
- Higher R&D in absolute terms mainly driven by FX effects with continued investments in high growth & emerging segments, e.g. novel modalities
- EBITDA pre growing +11% org., still exceeding sales growth despite significant investment in future growth and inflationary environment; supported by pricing, op. leverage and product mix in core business

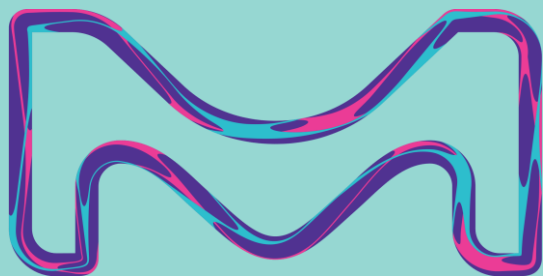
Net sales bridge



EBITDA pre bridge



healthcare



Healthcare

Pioneering patient benefit in MS for > 30 years

Rebif[®]
(interferon beta-1a)

- Blockbuster **platform therapy**
- Well-established clinical profile
- >1.8m patient-year experiences¹
- Continued upgrading (pregnancy label, injection devices)



EMA 1998 | FDA 2002
>100 countries

MAVENCLAD[®]
cladribine tablets

- Oral **high-efficacy therapy** with unique posology & mode of action^{2,3}
- Only product to demonstrate full antibody response to COVID-19 vaccines⁴
- Growing in HE dynamic market
- >40,000 patients¹



EMA 2017 | FDA 2019
84 countries

EVobrutinib
BTKi

- Designed for **best-in-class efficacy**⁵
- Full covalent binding and dosing regimen expected to enable constant, near complete BTK occupancy⁶
- Dual mode of action targeting both B-cells and immune cells in the CNS and periphery^{6,7}



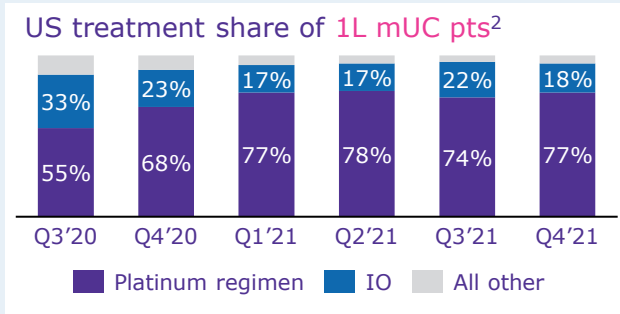
Phase 3 Clinical Development

Healthcare

Building focused leadership positions in Oncology

Building leadership in mUC¹

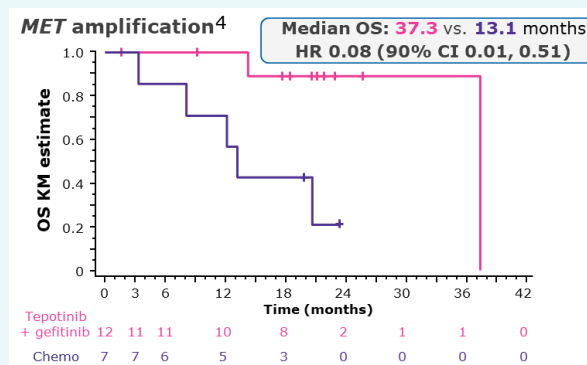
- **Bavencio** redefined SoC in mUC with unique 1L maintenance Tx. Since launch, platinum-based regimen has grown substantially



- Significant opportunity to drive further growth by increasing adoption of 1L maintenance Tx
- Strengthen Bavencio as SoC with novel combinations (e.g. Q2 2022 intended start of Javelin Bladder Medley study)

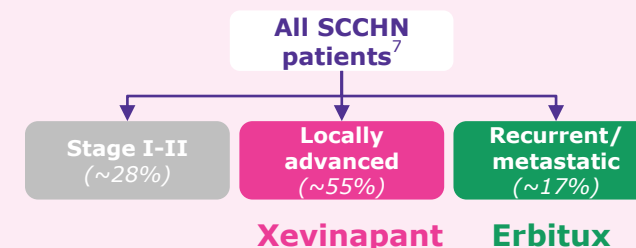
Defining leadership in MET-driven tumors

- **Tepmetko** - discovered and developed inhouse, highly potent and selective c-MET inhibitor
- Has shown consistent efficacy in METexon14 mutation across treatment lines³ and strong tolerability profile
- Foundation for expansion with MET-amplified tumors indications

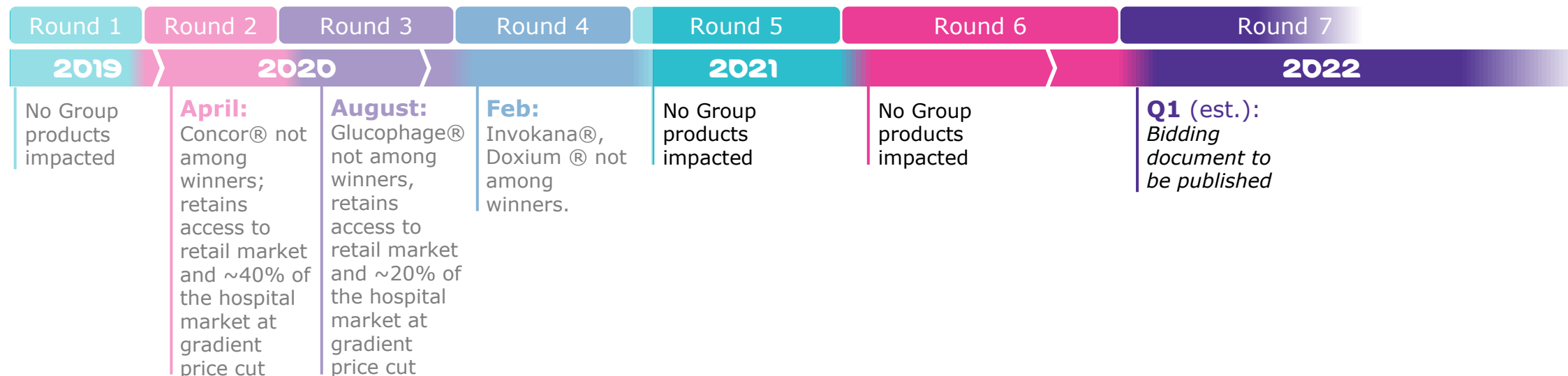


Expanding leadership in SCCHN

- **Xevinapant⁵** focuses on a novel mechanism with curative intent in a large segment with high unmet need, complimentary to Erbitux
- Strong clinical POC, doubling OS in Phase II study⁶
- Untreated and unresectable LA SCCHN patient candidates for chemoradiotherapy ~40K US & EU5



China's VBP: Rounds 5 and 6 with no impact on Group. Confidence in approx. stable established portfolio business in 2022













- ▶ Glucophage back to QoQ growth Q4'21 post VBP impact with a positive outlook for 2022
- ▶ Erbitux successfully included in NRDL for **both mCRC and SCCHN** for reimbursement (effective January 1st, 2022)

Acronyms: VBP = Volume-Based Procurement, NRDL = National Reimbursement Drug List, mCRC = metastatic Colorectal Cancer, SCCHN = Squamous Cell Cancer of the Head and Neck



Pipeline with uncorrelated risk and significant potential


























Five focus assets with FIC potential

	FIC POTENTIAL	COMPETITION	PROMISE
Evobrutinib (BTK inhibitor)			Tackling unmet need for patients in RMS: Addressing chronic inflammation and progression between relapses, in addition to reducing acute inflammation with BIC ARR Comprehensive PhII data supports BIC profile
Xevinapant (IAP inhibitor)			Transformative patient benefit – Maximizing chances for cure for patients with locally advanced SCCHN
Berzosertib¹ (ATR inhibitor)			Blocking ATR “master regulator” of DNA repair to enhance efficacy of TOP I inhibitors for patients with few treatment options
M1231 MUC1/EGFR bi-specific ADC			Next generation “Triple Innovation” ADC for patients with solid tumors aiming for effective delivery of potent chemotherapy payload with reduced on & off target toxicity
Enpatoran TLR7/8 inhibitor			Small molecule for targeted inhibition of important lupus mediator TLR7/8, aiming for improved efficacy with low infection risk

¹Press Release June 3rd 2022: Following an interim analysis of DDRiver SCLC250, decision has been made to discontinue the study. Open innovation approach will be continued

Focused Leadership

Leveraging and extending deep expertise

	EVOCRUTINIB	XEVINAPANT	BERZOSERTIB ¹	M1231	ENPATORAN
Disease insights/ Wealth of data	MS leadership  	SCCHN leadership  		NCSLC Lung Cancer (Likely indication) 	Depth & breadth of clinical trial experience and data 
Biologic expertise	Immune receptor & immune complex signaling  	Apoptosis 	DNA damage response (DDR)  	Oncogenic signaling/ EGFR receptor  	Innate and adaptive immunity  
Platform capabilities	FIC small molecule  	<i>In-licensed</i>	<i>In-licensed</i>	Next generation ADCs/ bi-specific antibody  	FIC small molecule  
World-Class Collaborations		Existing collaboration on IO combo 	NCI Tempus 	Sutro 	Academic collaborators (for TLR8 structure & disease modelling) 



Potential FIC¹² BTK inhibitor, designed for BIC¹³ efficacy

FIC BTK INHIBITOR EVOBRUTINIB

- **Pioneering program**, developing breakthrough mechanism of action with potential to change SoC in RMS
- Aiming to **address chronic inflammation and progression between relapse** in addition to **reducing acute inflammation, delivering BIC ARR**
- **Strong clinical data** supporting our confidence in Evobrutinib BIC profile
- **PhIII studies** (Evolution MS 1&2) ongoing

	EVOBRUTINIB	TOLEBRUTINIB ¹⁴	FENEBRUTINIB ¹⁵	REMIBRUTINIB ¹⁶ / ORELABRUTINIB ¹⁷
ARR at 48 weeks (PhII)	0.11 ¹	0.17 ⁷	No PhII conducted	No PhII conducted
PhIII dose supported by robust data?	✓ ^{2,3}	✓ ⁸	⊖ No dose finding study in MS	⊖ No dose finding in MS
95% occupancy at trough in patients	✓ ^{3,4}	Not shown	Not available	Not available
Disease relevant CNS concentration?	✓ ^{5,4}	⊖ Only single dose effect in HV (120mg dose)	⊖ Not studied	⊖ Not studied
Statistically significant effect on SEL volume based on MRIs over 48 weeks	✓ ⁶	⊖ Not seen	⊖ Not studied	⊖ Not studied
Safety/Tolerability? ¹¹	✓ ^{1,4}	✓ ^{8,4}	✓ ¹⁰	Not available

¹ Montalban X, et al. N Engl J Med 2019;380:2406–17; ² Pappasoulitis O, et al. PAGE 2021;29:Abstr 9801; ³ Pappasoulitis O, et al. Eur J Neurol 2021;28(Suppl. 1):120 [OPR-084]; ⁴ Montalban X, et al. Mult Scler 2020;26 (Suppl. 3):213 [Abstract P0197]; ⁵ Piasecka-Stryczynska K, et al. Mult Scler Relat Disord 2021;51:103001 [Abstract P013]; ⁶ Arnold D, et al. ECTRIMS 2021 [OP115]; ⁷ Oh J, et al. ECTRIMS 2021 [P667]; ⁸ Reich D, et al. Lancet Neurol 2021;20(9):729-38; ⁹ Owens T, et al. Clin Transl Sci. 2021; doi: 10.1111/cts.13162; ¹⁰ Oh J, et al. Neurology 2021;96(Suppl. 15):Abstr 4564; ¹¹ Evobrutinib, Tolebrutinib and Fenebrutinib have shown asymptomatic & reversible ALT elevations that have been reversible on treatment withdrawal; ¹² First in Class; ¹³ Best in Class; ¹⁴Sanofi; ¹⁵ Roche (Genentech); ¹⁶ Novartis; ¹⁷ InnoCare

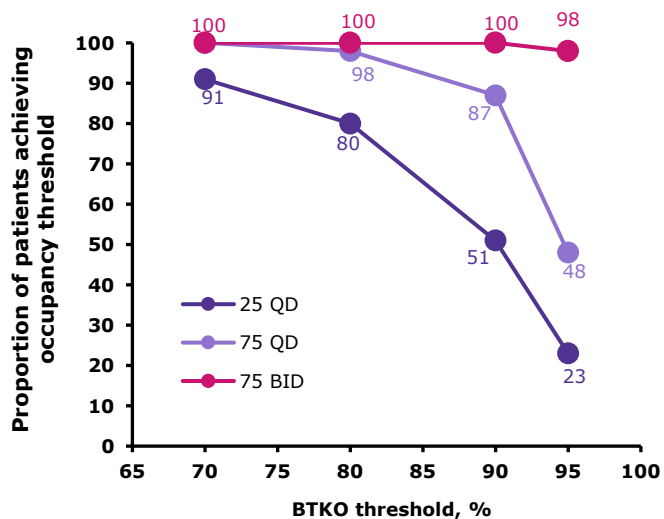
Protein turnover of BTK requires BID¹ dosing to achieve optimal BTK occupancy for best efficacy

98% of patients receiving 75mg BID achieved >95% trough BTKO²

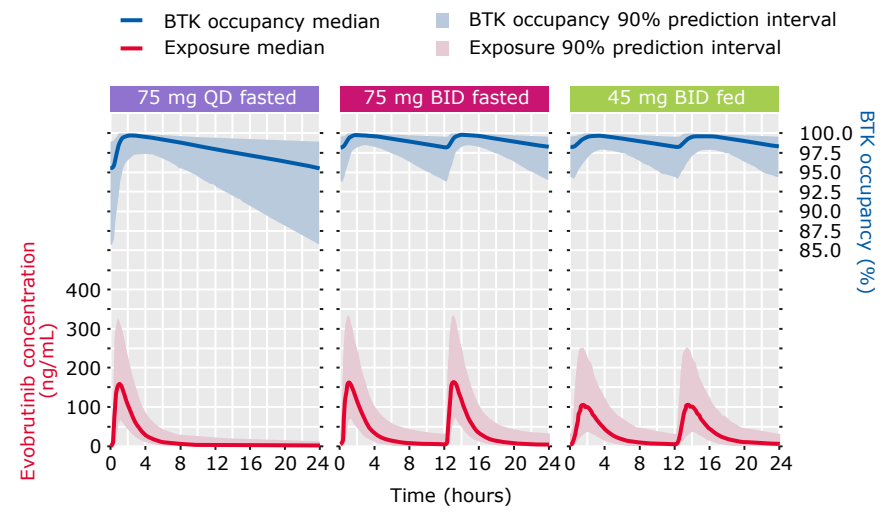
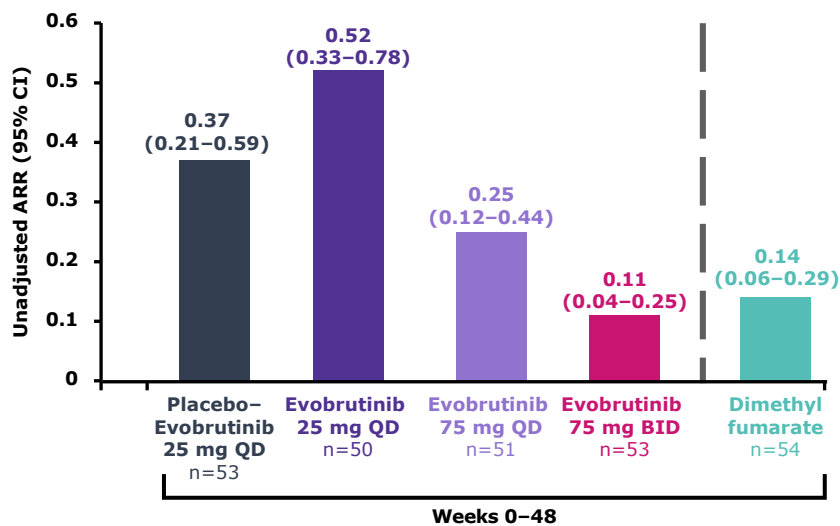
Patients achieving >95% BTKO experienced greatest ARR reduction³

Food effect enables a lower dose in PhIII¹

PATIENTS ACHIEVING BTKO THRESHOLD, %



PhII SECONDARY ENDPOINT



Due to continuous BTK protein turnover QD⁴ dosing of a covalent inhibitor with short half-life results in suboptimal BTKO

ARR reduction in the Evobrutinib 75mg BID group was sustained over 108 weeks^{1,2}

PhIII dose (45mg BID fed) reaches comparable Evobrutinib exposure and BTK occupancy to PhII dose (75mg BID fasted) despite modestly lower plasma peak concentration

¹ Twice a day

² Bruton's tyrosine kinase occupancy; Papanicolaou et al. Eur J Neurol 2021;28(Suppl. 1):120 [OPR-084]

³ Annualized relapse rate; Montalban X. et al. N Engl J Med. 2019 Jun 20;380(25):2406-2417. doi: 10.1056/NEJMoa1901981. Epub 2019 May 10.

⁴ Once a day



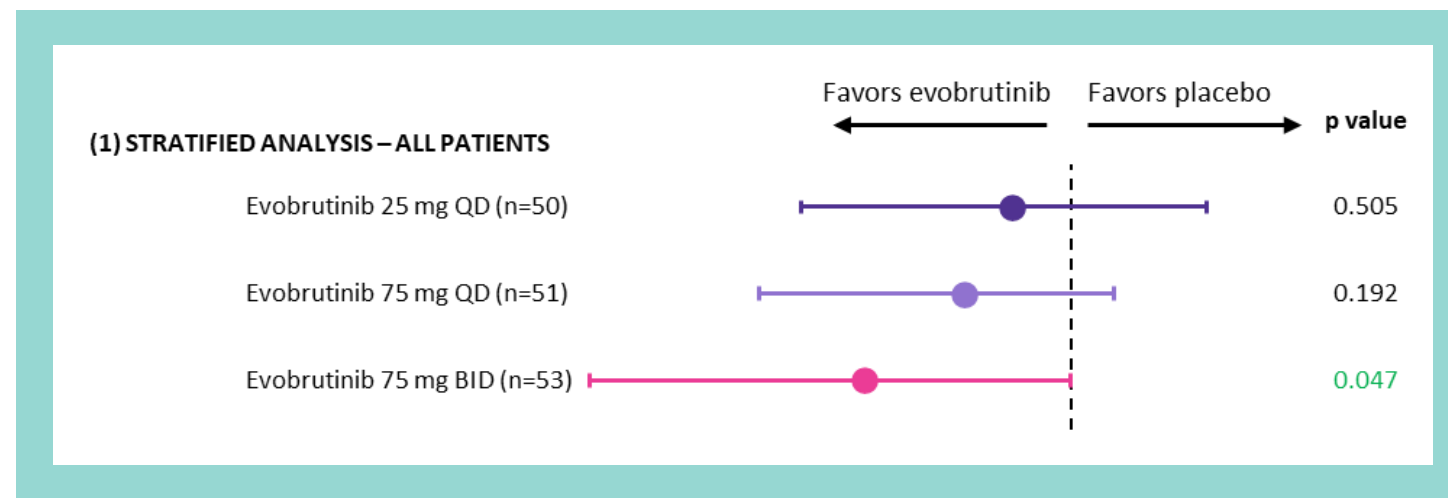
First clinical evidence of impact on brain lesions associated with chronic inflammation^{5,6}

SELs – A BIOMARKER FOR CHRONIC TISSUE LOSS IN THE ABSENCE OF ACUTE INFLAMMATION

- Slowly expanding lesions (SELs) (also known as “smouldering lesions”) are chronically active, demyelinated MS lesions, thought to be driven by sustained microglial activity, resulting in the progressive accumulation of irreversible neural tissue damage and axonal loss¹
- SELs are visible on conventional MRI/T2 images MRI and show gradual, radial expansion over time
- SEL activity and ongoing tissue damage within SELs predict long-term disability²
- Approved MS therapies have shown little impact on SELs³, - consistent with their main treatment effect on acute inflammation

ECTRIMS 2021
oral presentation

EVOBRUTINIB REDUCED SEL VOLUME IN A DOSE-DEPENDENT MANNER AT 48 WEEKS⁴



¹ Elliott C, et al. *Mult Scler* 2019;25:1915-25; ² Elliott C, et al. *Brain* 2019;142:2787-99; ³ Preziosa P, et al. *Mult Scler* 2021;27(10):1520-32; ⁴ Arnold D, et al. ECTRIMS 2021 [OP115]; ⁵ Montalban X, et al. ECTRIMS 2018 [232075; 322]; ⁶ Montalban X, et al. *N Engl J Med*. 2019 Jun 20;380(25):2406-2417. doi : 10.1056/NEJMoa1901981. Epub 2019 May 10.

Summary

Potential FIC BTK inhibitor designed for BIC efficacy

- **Pioneering development** of breakthrough MoA with potential to rewrite SoC in RMS
- Aiming to **address chronic inflammation and progression between relapse** in addition to **reducing acute inflammation, delivering BIC ARR**
- **Confidence in BIC profile supported by compelling clinical data from our comprehensive PhII program**

- ✓ Best ARR was achieved at BTKO of 95%; ARR of 0.11 at 48 weeks is supportive of BIC efficacy
- ✓ Importantly: Achieving 95% BTKO requires BID dosing of a covalent BTK inhibitor with short half-life due to continuous turnover of BTK protein
- ✓ Evobrutinib concentrations achieved in CSF of RMS patients support an effect on microglia
- ✓ Dose dependant reduction of SEL, a biomarker for disease progression is first evidence of Evobrutinib effect on chronic inflammation and progression
- ✓ De-risked profile based on safety analysis in >1000 patients

- **PhIII studies** (Evolution MS 1&2) **ongoing** (Sept 2021), aiming for read out in Q4 2023

Targeted inhibition of important lupus mediator aiming for improved efficacy with low infection risk

- **For lupus patients, precise intervention for improved efficacy at low infection risk remains an unmet need in lupus**
- Enpatoran is an oral small molecule inhibitor of TLR7/8
- There is **evolving genetic evidence for TLR7 as a critical driver of lupus pathologies**

Inhibition of TLR7/8, a important lupus mediator is expected to result in

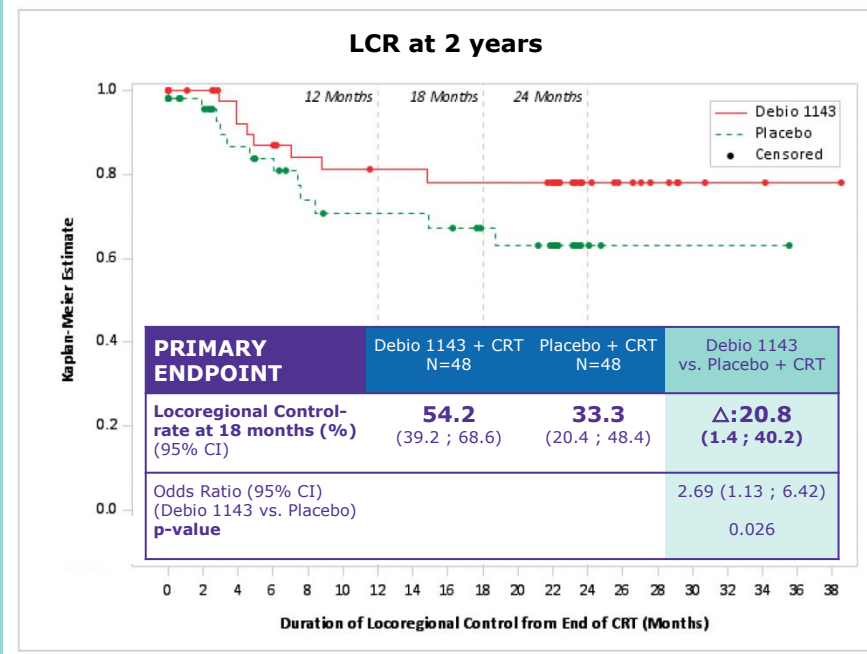
- broad inhibition of lupus-relevant effectors
 - with potential for improved efficacy compared to strategies targeting single effectors (pDC, IFN, B-cells)
 - at low risk of infection
-
- **Compelling MoA, functional and safety data from PhI HV and COVID PhII study**
 - **Innovative PhII in CLE and SLE initiated in H1 2022, aiming for first analysis results by H1 2023**

Maximizing chances for cure in LA SCCHN

PhII: Consistent benefit across primary & secondary endpoints

PRIMARY ENDPOINT LCR

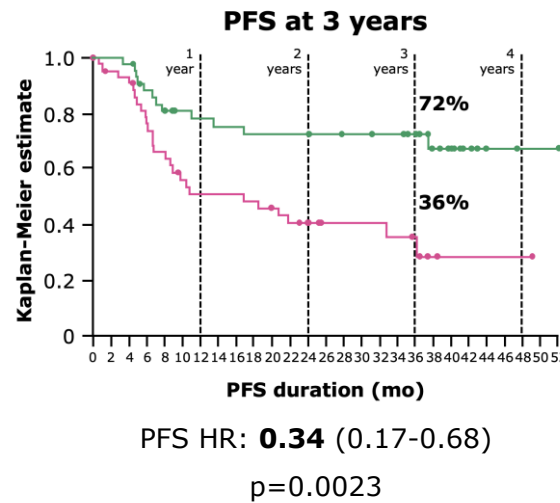
first presented at ESMO 2019



Lancet Oncology, August 2020, doi:10.1016/S1470-2045(20)30327-2

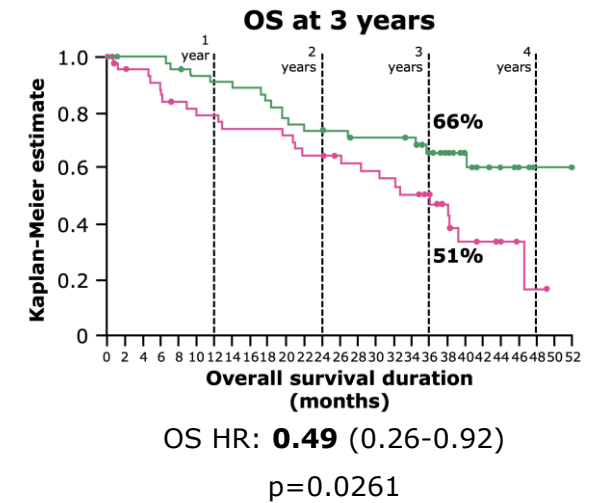
SUBSTANTIAL IMPROVEMENT OF PFS AND OS

3-year update, presented at ESMO 2020



CR at 6 months (post CRT completion)
52% vs 38% for placebo

ESMO 2020; Bourhis J, et al. Abstract No. LBA39



Xevinapant
Placebo

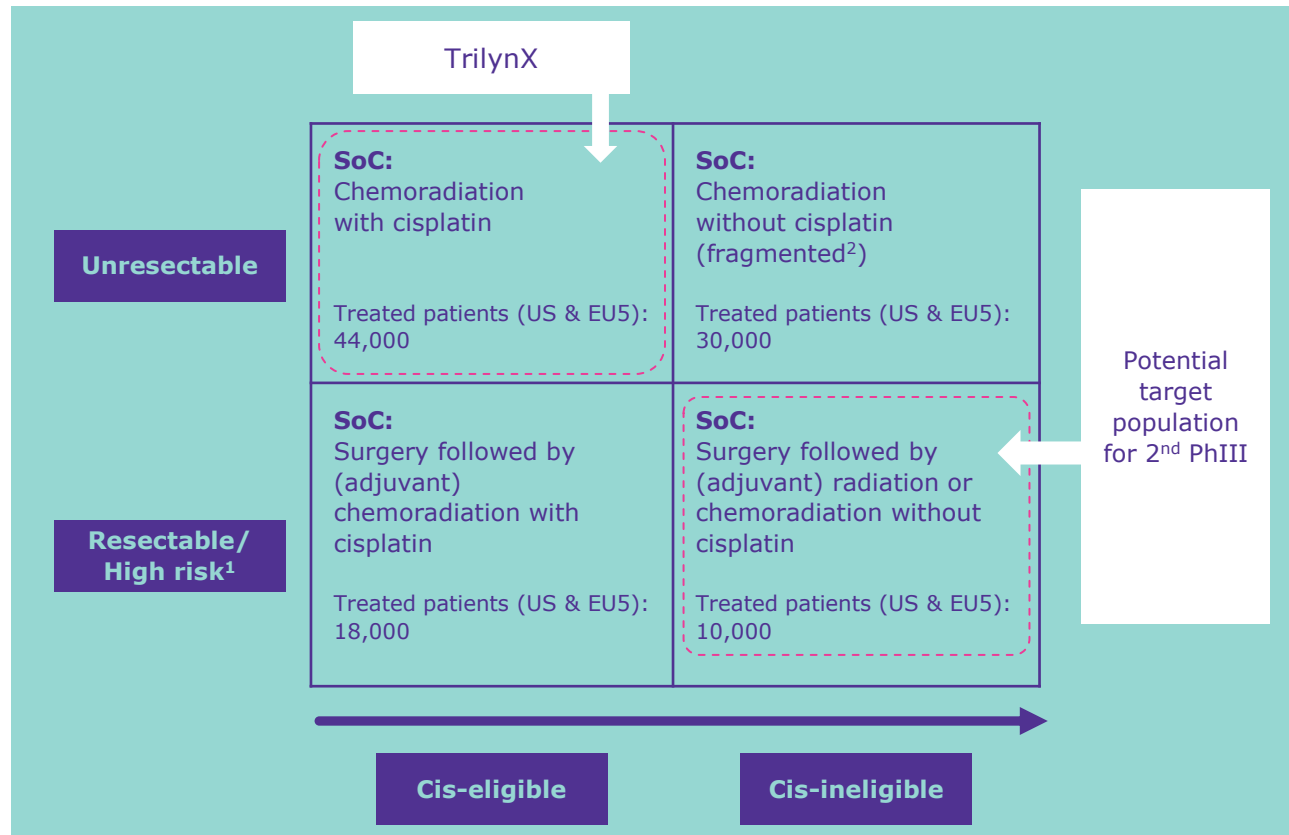
Up Next: 5-year Update of OS at ESMO 2022

LA SCCHN = Locally advanced squamous cell carcinoma of the head and neck



Leveraging market-leading expertise in SCCHN

LA SCCHN SIMPLIFIED TREATMENT PARADIGM AND EPIDEMIOLOGY



Leveraging our Erbitux heritage

- LA SCCHN is a **curative setting** that requires a multi-disciplinary approach
- Surgery and/or (chemo-)radiation therapy is the standard of care, though almost 50% of patients progress
- **Limited progress in ~20 years**
 - IO has not been successful due to challenges of concurrent radiation
- **Building focused leadership in LA SCCHN**
 - Our goal is to transform LA SCCHN in combination with (C)RT with a focused PhIII program

Xevinapant – Maximizing chances for cure

¹ Low/ intermediate risk patients: SOC is Surgery followed by (adjuvant) radiation, Incidence (US + EU5): 41,000; ² The combination of cetuximab/RT is the only approved regimen for patients ineligible to receive high-dose cisplatin. Multiple non-approved regimens are used in practice, however, with differences across geographies and depending on patient status and physician preference.

Tepotinib (MET kinase inhibitor)

First-in-class launch in MET Exon14 sets foundation for EGFRm/METamp opportunity



Lay the foundation in NSCLC – MET Exon14

(VISION study, NCT02864992
3-5% of total NSCLC population)



Tap into a growing opportunity in NSCLC – EGFRmut/ METamp

(INSIGHT 2 study, NCT03940703
2-5% of total NSCLC population)

- **Strong and long-lasting efficacy results** presented at WCLC 2021 (in both first line and later lines; total of 275 patients), additionally, at ASCO 2021, Tepmetko has shown efficacy in patients with brain metastases
- **First-in-class launch¹** in Japan² in March 2020, Sakigake designation³ granted in 2018
- **Approval by US FDA¹** received on February 3, 2021 and by the European Commission on February 18, 2022
- **15 worldwide approvals** granted so far

- **Increased EGFRm detection** with testing and treatment moving into earlier lines of therapy (ADAURA trial demonstrates a 79% reduction in the risk of death with Osimertinib in the adjuvant setting (ASCO 2020), suggesting an even greater uptake of Osimertinib)
- **METamp as the main mechanism of acquired resistance** – publications suggest prevalence of METamp post-Osimertinib in tissue at levels between 30-66%⁴, with possible underestimation of gene amplification in plasma.

1: approved for both treatment naïve and previously treated METex14 positive NSCLC patients; 2: second largest Oncology market globally; 3: SAKIGAKE designation promotes research and development in Japan, aiming at early practical application for innovative pharmaceutical products; 4: Roper et al., "Clonal Evolution and Heterogeneity of Osimertinib Acquired Resistance Mechanisms in EGFR Mutant Lung Cancer", Cell Rep Med, 2020; Acronyms: EGFR = Epidermal Growth Factor Receptor; NSCLC = Non-small cell lung cancer



Tepotinib (MET kinase inhibitor)

Tapping into the rapidly evolving EGFRm/METamp market – Encouraging INSIGHT 1 data



INSIGHT 2 – Tepotinib + Osimertinib in Osimertinib Relapsed METamp NSCLC

Recruiting

- **Study design recently amended to reflect evolved and future standard of care:**
 - **Target population** – Inclusion criteria adjusted to focus solely on 1L Osimertinib failures
 - **Testing** - Streamline patient enrollment based on current gold standard method (TBx FISH)
 - **METamp as the main mechanism of acquired resistance** – publications suggest prevalence of METamp post-Osimertinib in tissue at levels between 30-66%, with possible underestimation of gene amplification in plasma.
- Estimated primary completion date: **November 2022**

A solid foundation - Encouraging INSIGHT 1 data (18-months follow-up presented at WCLC 2019)²

Endpoint	Tepotinib + gefitinib	Chemotherapy
Primary - PFS (HR 0.13 [90% CI 0.04, 0.43])	16.6 m	4.2 m
Secondary - ORR (OR 2.67 [90% CI 0.37, 19.56])	66.7%	42.9%
Secondary - OS (HR 0.09 [CI 0.01, 0.54])	37.3 m	13.1 m

- ✓ **Proof of Concept: MET amplification can be considered a suitable biomarker** for treatment with Tepotinib
- ✓ **Safety:** generally **well-tolerated**, most adverse events mild to moderate

1: Piotrowska et al., "Landscape of Acquired Resistance to Osimertinib in EGFR -Mutant NSCLC and Clinical Validation of Combined EGFR and RET Inhibition with Osimertinib and BLU-667 for Acquired RET Fusion", AACR Cancer Discovery 2018; 2: Wu et al., "Long term outcomes to tepotinib plus gefitinib in patients with EGFR mutant NSCLC and MET dysregulation: 18 month follow up", presented at WCLC 2019; Acronyms: FISH = Fluorescence in situ hybridization; TBx = Tissue Biopsy



Healthcare Q3: Record sales quarter with +9% org. growth; strong contribution from recent launches and established portfolio

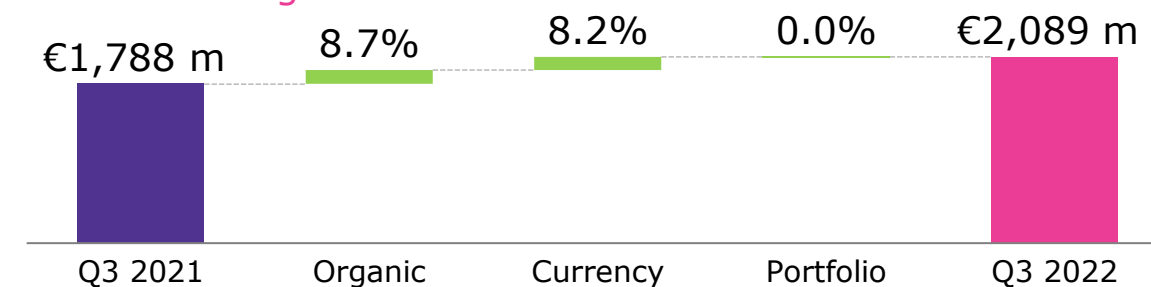
Healthcare P&L

[€m]	IFRS		Pre	
	Q3 2021	Q3 2022	Q3 2021	Q3 2022
Net sales	1,788	2,089	1,788	2,089
M&S*	-386	-413	-386	-412
Admin	-79	-84	-77	-79
R&D	-486	-431	-486	-409
EBIT	453	606	462	635
EBITDA	532	683	-	-
EBITDA pre	541	711	541	711
(in % of net sales)	30.3%	34.0%	30.3%	34.0%

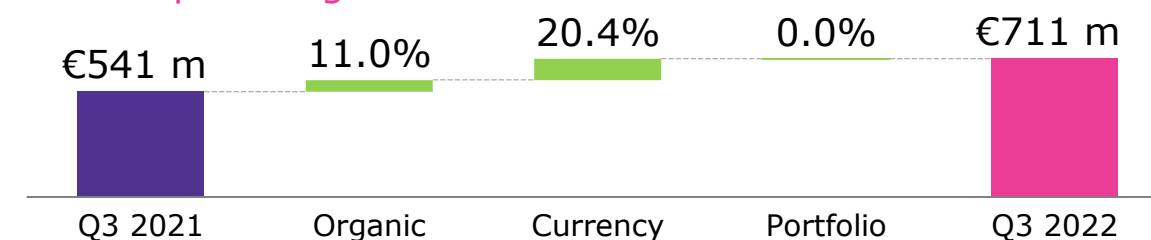
Comments

- Oncology up +25% org., driven by continued strong Bavencio® ramp-up (+51% org.) across regions as well as Erbitux® growth (+14% org.)
- Mavenclad® continued to grow +10% org., more than offsetting muted Rebif® decline -4% org. amid one-off channel dynamics and softer comps
- Established portfolio up +5% org. with solid CM&E performance of +6% org. and Fertility growth of +3% org.
- M&S declining in % of sales; absolute increase mainly driven by increasing activities and rise in physical congress attendance
- Lower absolute R&D level largely driven by LY bintrafusp termination provision partly offset by unfavorable FX effects
- Strong organic EBITDA pre with profitable growth (+11%) supported by controlled cost development and one-off channel dynamics with low- to mid double-digit € million contribution

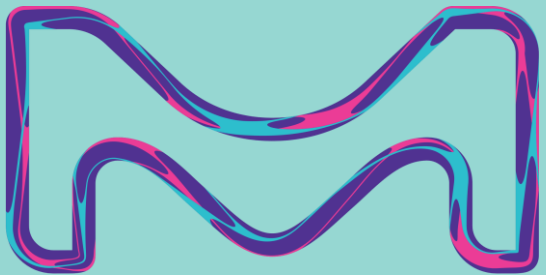
Net sales bridge



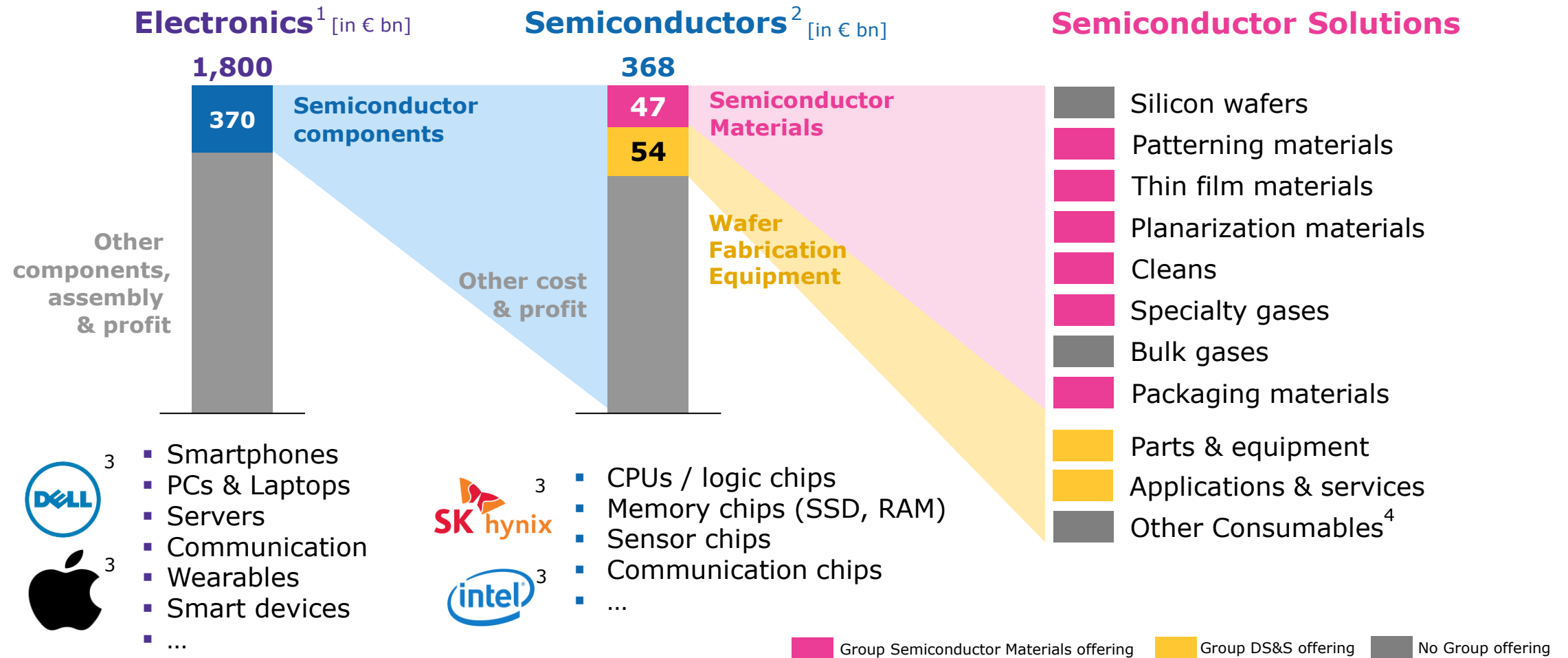
EBITDA pre bridge



electronics



Semiconductor Solutions – **integrated materials player, well positioned to serve the need of customers in semiconductor fabrication**



Illustrative Industry P&Ls based on Sources: ¹Prismark 2021, ²Prismark 2021 & WSTS/SIA & SEMI Q1 2020; ³Representative player in the industry, non-exclusive list, not based on any underlying criteria; ⁴e.g. Filters, Pads, etc.; CPU = Central Processing Unit; RAM = Random Access Memory; SSD = Solid State Disk; CMOS = Complementary metal-oxide semiconductor



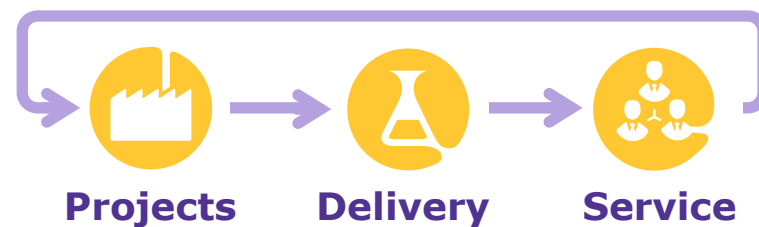
Unique comprehensive products and services portfolio offers end-to-end solutions, well-placed in high growth segments



Steps of Group customers in manufacturing integrated circuits



Steps in Group's Delivery Systems & Services business

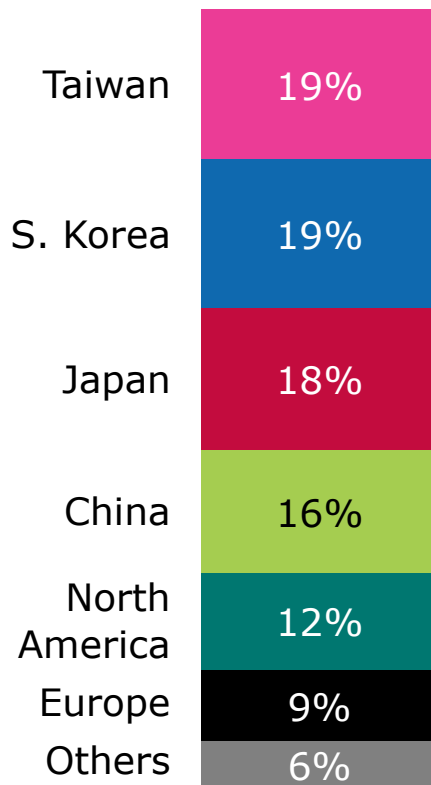


- Group Semiconductor Materials offering
- Group Delivery Systems & Services offering
- Group Intermolecular products & services



Beyond a comprehensive portfolio Semiconductor Solutions also has an industry spanning customer base, supplying various end markets

2019 wafer capacity by region¹



Selected customers per region²



Semiconductor Solutions has **OVER 100 CUSTOMERS**

supplying all top 10 chip makers and virtually all of the top 100³

- Focus on logic chips
- Focus on memory chips
- Focus on other chips

¹SEMI World Fab Forecast Q3 2020 - Dec 2019 capacity,

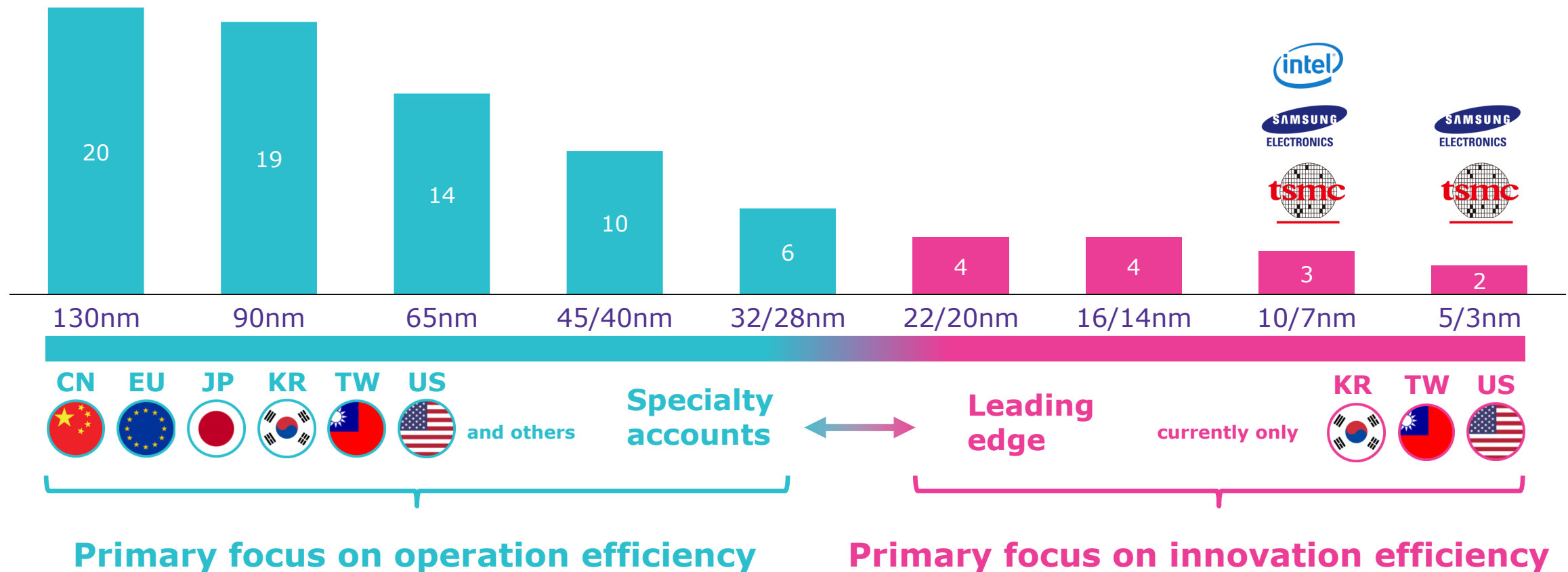
²Representative, non-exclusive list, not based on any underlying criteria

³Based on H1 2020 Sales



Only 3 companies are currently running volume production $\leq 10\text{nm}$ These companies have the largest market shares across all nodes

Number of companies currently running volume production per logic chip node¹



¹Source: Wikichip.org and own data; volume production as of Sep 2020; countries are listed in alphabetical order



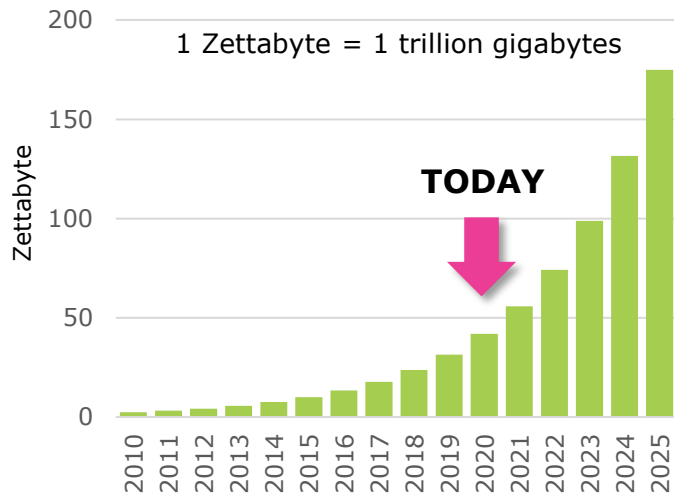
Technology trends inevitably drive exponential data growth... ...more chips needed to generate, transfer, process & store data

Data created worldwide
is growing +30% annually

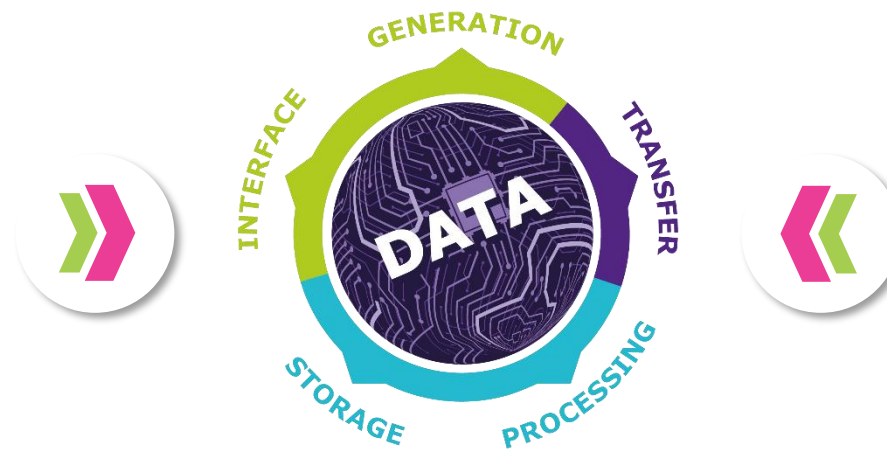
All segments of data application
are affected by global data growth

Technology trends strongly impact
relevance of data application segments

Size of global data sphere



Source: IDC DataAge 2025 Whitepaper



Technology market growth - examples

5G Technology¹
>122% CAGR

Artificial Intelligence²
>33% CAGR

IoT Sensors³
>24% CAGR

Data Center Services⁴
>13% CAGR

Autonomous Driving⁵
>18% CAGR

Semiconductor Solutions supports growth trend as part of “**the company behind the companies, advancing digital living**”

1) alliedmarketresearch.com, Prismark 2020, CAGR 2021-2026; 2) fortunebusinessinsights.com, post-gazette.com, CAGR 2018-2026; 3) mordorintelligence.com, computerweekly.com, CAGR 2020-2025; 4) mordorintelligence.com, Prismark 2020; CAGR 2020-2025; 5G = 5th-generation cellular wireless; IoT = Internet of Things 5) mordorintelligence.com, autonomous car market value CAGR 2020-2025

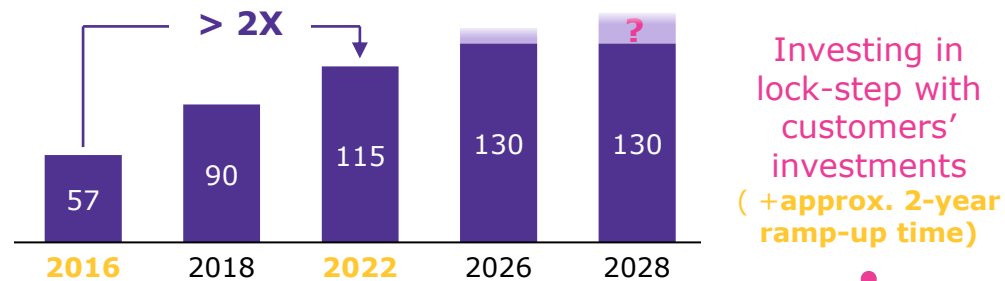


“Level Up” Scale - Expanding in synch with customer demand

A partner of choice, in step for higher demand

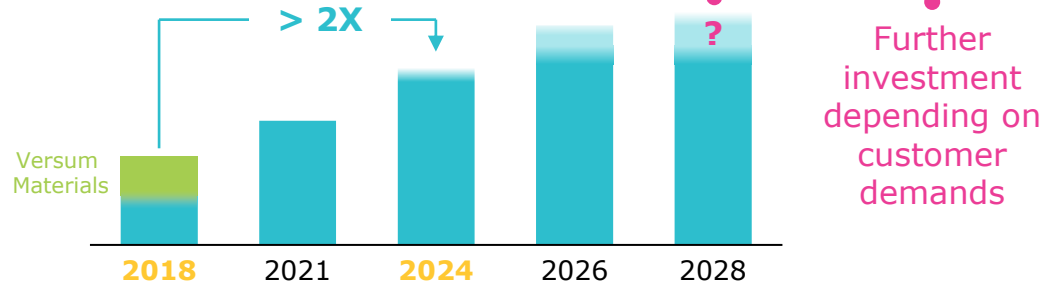
Semiconductor industry

CAPEX p.a.¹ [€bn]



Electronics

CAPEX illustrative [majority in Semi]



1) McClean March 2021, Company announcements; FX rate: 1.18 \$/€; 2) incl. IT

Smart localization, investing close to customers

Share of semi material market ¹	Key investments
Taiwan ~25%	<ul style="list-style-type: none"> Additional large site ensuring supply for key customers Further expand R&D footprint
Korea ~25%	<ul style="list-style-type: none"> Expand strong footprint, even higher customer proximity
China ~15%	<ul style="list-style-type: none"> Become most localized multinational ready for growth Expand production and R&D
USA ~10%	<ul style="list-style-type: none"> Expand capacity for global & local supply Enable new sites of key customers

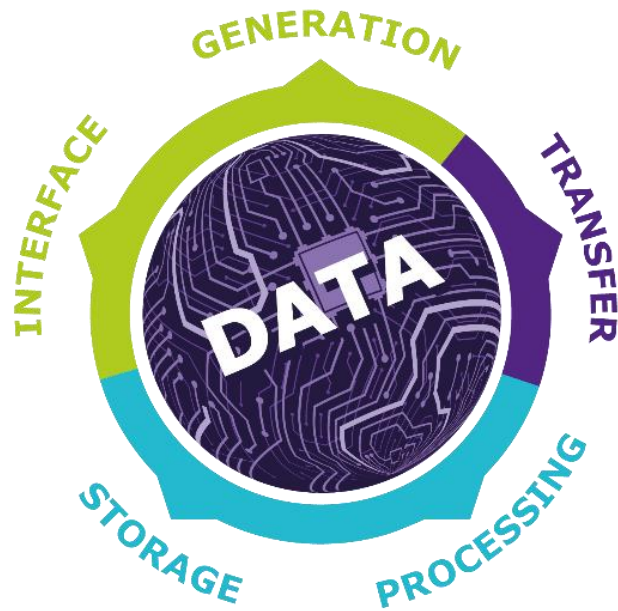
1) Source: Linx Consulting – only relevant segments, 2020; 2) Aggregated spend 2021-25, total spend: ~€2.1 bn, thereof ~11% (~€250 m) in Germany, also to fund global programs



“Level Up” Tech – delivering today and enabling tomorrow

Strong portfolio of silicon & optical technologies empowering today’s applications

Solutions empowering customers to make **smaller, faster, more energy efficient** & **more sustainable** devices in various applications across the entire **data sphere**

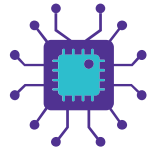


- Data Generation**
Sensors, MEMs
- Data Transfer**
Network chips, interconnects, antenna
- Data Processing**
Logic chips: CPUs, GPUs
- Data Storage**
Memory Chip: DRAM, 3D NAND
- Data Interface**
Displays: TV and mobile (LC, OLED)

And enabling tomorrow’s leading-edge technologies

Selected future applications

Our contribution



- Next-Gen image sensors**
Leverage semiconductor & display knowledge for new & optimized sensors
- Smart Antennas**
New LC, enabling beam forming, replacing bulky mechanical antennas
- Transition to nanosheets**
Novel etchants & dopants allowing higher scaling & lower power consumption
- 3D NAND with >300 layers**
ALD¹ materials that help minimize cross talk between memory cells
- Foldable displays**
Broad set of materials from encapsulation to the OLED stack

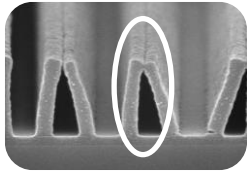
1) Atomic Layer Deposition



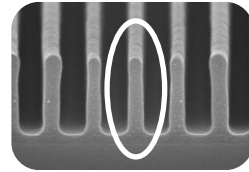
Electronics

Expanding the limits of how small you can go

Pattern collapse

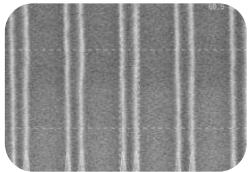


AZ[®] rinse materials



As lines get narrower and closer together in advanced chip generation, lines tend to “stick” due to surface tension.

Lithography limitation

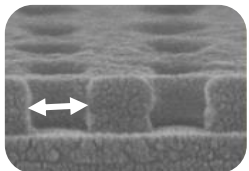


Directed self-assembly (DSA)

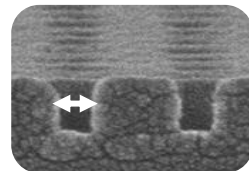


Block copolymer can generate small lines or contact holes by self-assembly. This allows miniaturization without expensive new equipment.

Wide features



AZ[®] shrink materials



Shrink materials “shrink” the gap between lines and, hence, allow the manufacture of narrower features otherwise not possible.



Group delivers highly innovative solutions for complex customer problems



Semiconductor Solutions

Partner of choice for semiconductor manufacturers globally



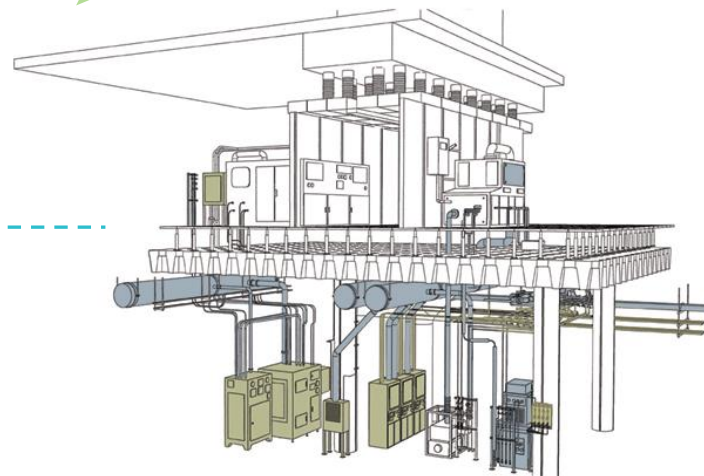
semiconductor materials

Winning in the fab with process owners

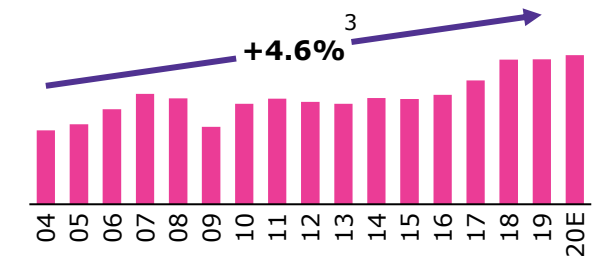


delivery systems & services

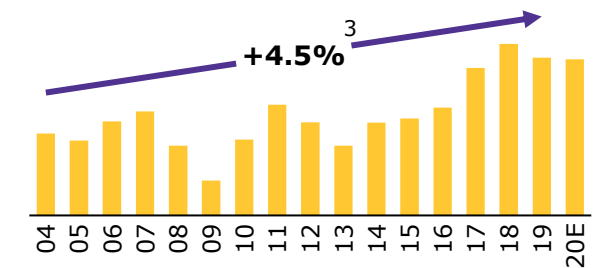
Winning in the sub-fab with facility engineers



Fab material market ¹



Fab equipment market ²



One fab address = two customers: buying cycles, interfaces & nature of business fundamentally different, but ... **combined, highly synergistic**

Fab = Semiconductor fabrication plant

¹Source LINX-Consulting, wafer processing materials - excludes silicon wafers and packaging materials;

²Source: Gartner; ³2004-2019 15-year CAGR



DS&S - Delivery Systems & Services: a trusted global player in **safe and reliable delivery of hazardous materials** to semiconductor industry



Fab projects



- Designing bulk spec **gas delivery systems**
- Managing **construction and installation**
- High-volume customers who store large specialty gas **ISO containers outside fab**



Gas & chemical delivery



- Design and manufacture delivery systems for: specialty gases, CVD/ALD deposition materials, CMP slurries & cleans
- Systems **store gas/chemical containers** while in-use and **control material delivery parameters** to fab processes
- **Interface with customer's fab** process control and monitoring systems.



MEGASYS & in-fab service

- Provide **delivery systems maintenance, materials inventory management**, quality assurance, & new equipment installations
- Contracts with **18 customers' fabs**
- >500 global employees + **~100 field service technicians**

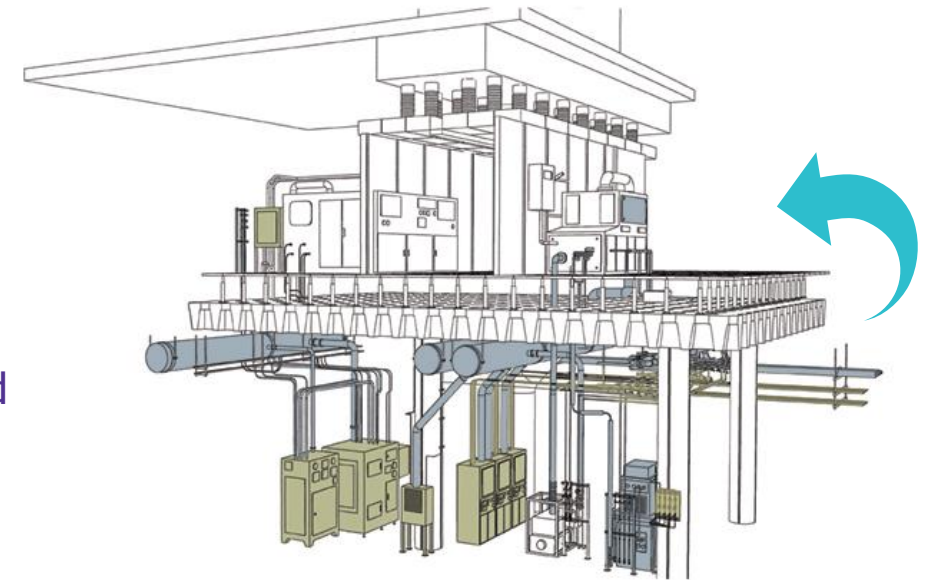


DS&S - Delivery Systems & Services

Winning in the fab equipment market

key strengths

- ✓ Operational and project execution excellence with **99.9997% uptime** of our equipment
- ✓ 30 years of experience with a **flawless safety record** and **full interoperability**
- ✓ **Global footprint** with flexible capacity **where the customer needs us**
- ✓ **Additional credibility** with materials consuming process owners from sub-fab engineers' experience



Ensure next-gen process requirements have **integrated materials + equipment solution**



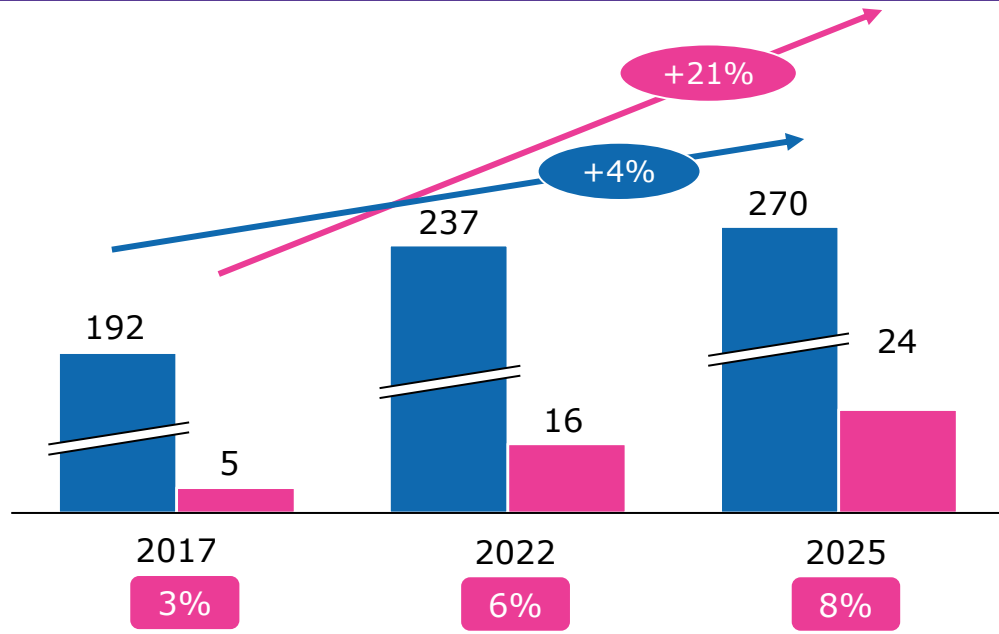
Enabling our customers in semiconductor fabrication **to run with operational excellence**

Electronics

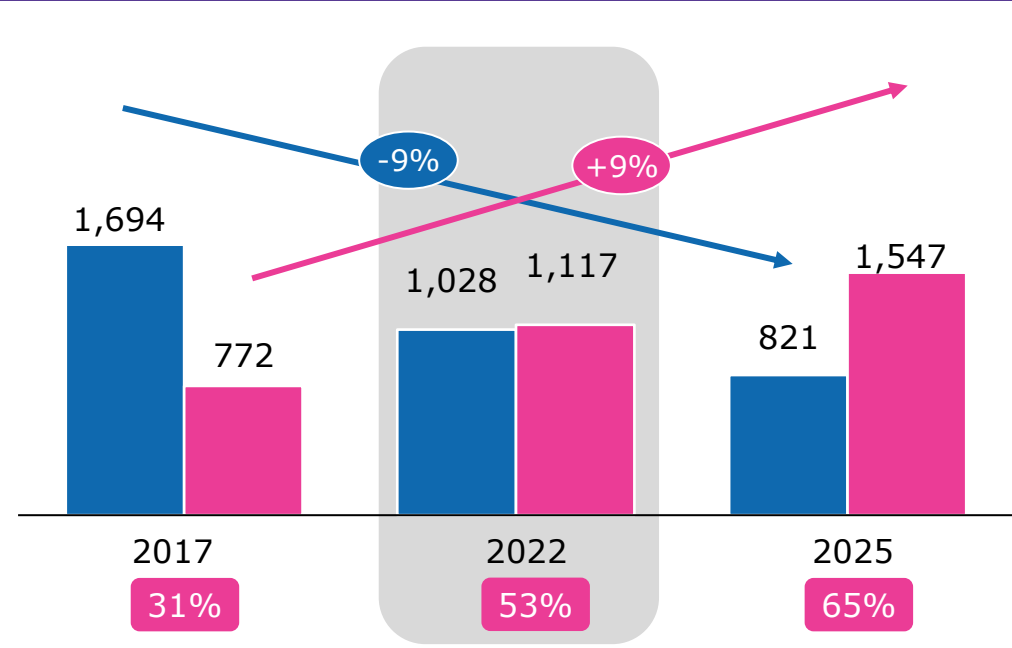
Display Solutions - OLED material market to exceed LC material market **already in 2022**

x% OLED shipment area / addressable material market [in % of total] Liquid Crystals OLED

Display shipment area¹
[km²]



Addressable material market²
[€m]



- **Continued growth** across all technologies
- **OLED growing faster than LCD**, but **LCD to command 90+% area share** for foreseeable future

- **Material value** per OLED display **higher** than in LCD
- **OLED material market to exceed LC material market by 2022**, but market split between **many more players**

¹Omdia; ²Internal Business Intelligence; Acronyms: LCD = Liquid-Crystal Display, OLED = Organic Light Emitting



Electronics

Strategic roadmap materializing

Measures for a bright future



Darmstadt

- In Darmstadt focus on R&D and production
- Immediate bottom line contribution from 2019 onwards
- Reduce the number of FTEs by ~15% = ~400 FTEs



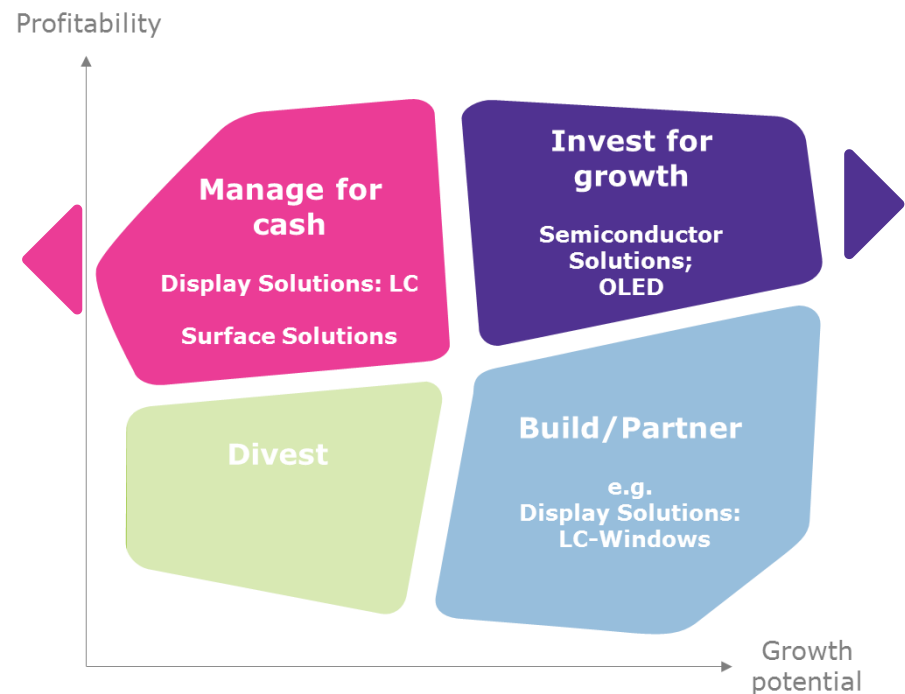
Chilworth

- Chilworth site during September 2019 successfully closed



Atsugi

- Shut down of Electronics activities at Atsugi site started (to be completed during 2021)
- R&D and production activities in Atsugi transferred and consolidated in other PM locations in Asia
- Consolidation of site structure in Japan



- Leading supplier of high-purity process chemicals, gases and equipment serving semiconductor manufacturers
- Track record of accelerated growth and industry leading profitability
- Creating a **leading electronic materials player** with **attractive long-term prospect**



- Leading in advanced materials innovation
- Acquisition to strengthen semiconductor technology offering
- Application specific **materials expertise** with that **perfectly complement** Group's business and technology portfolio



Bottom-line management to support margin ambition of 30% in the long-term



Both transactions successfully closed



Electronics Q3: Semi Solutions offsetting significant decline in Display amid softening markets

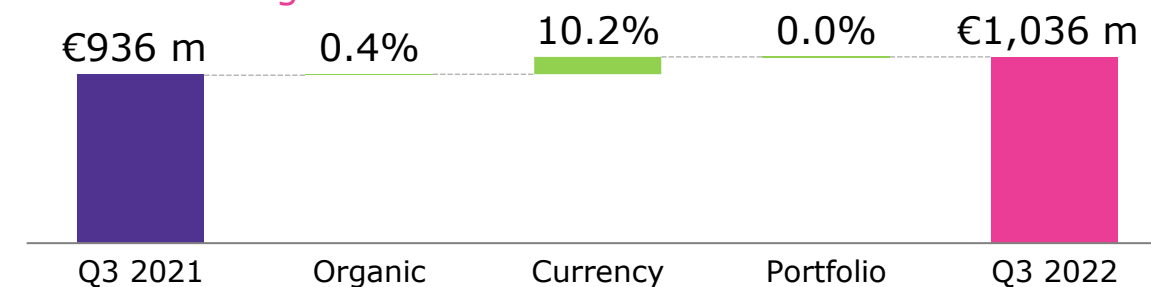
Electronics P&L

[€m]	IFRS		Pre	
	Q3 2021	Q3 2022	Q3 2021	Q3 2022
Net sales	936	1,036	936	1,036
M&S*	-147	-173	-145	-172
Admin	-39	-33	-28	-32
R&D	-72	-78	-72	-78
EBIT	125	144	163	162
EBITDA	277	294	-	-
EBITDA pre	297	302	297	302
(in % of net sales)	31.7%	29.1%	31.7%	29.1%

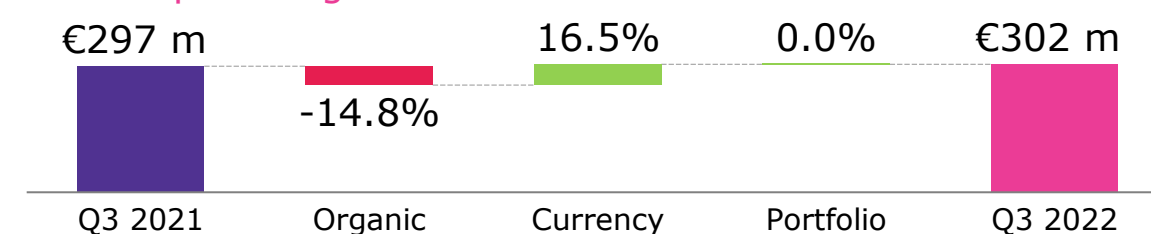
Comments

- Semiconductor Solutions: +15% org. growth fueled by high teens growth in Materials; DS&S large project business now included in comps
- Display Solutions: down -32% organically, driven by high decline in Liquid Crystals (amplified by lower utilization across customers)
- Surface Solutions: +4% org. growth driven by strong coatings and cosmetics business, more than offsetting softer industrials

Net sales bridge



EBITDA pre bridge



- M&S slightly up as a % of sales, mainly due to higher logistics cost
- R&D increase in line with sales growth, largely driven by FX; investments continue to focus on future growth of Semi Materials
- Organic EBITDA pre decline primarily driven by Display Solutions amid inflationary pressures (raw materials, energy & logistics) and capacity ramp-up for future growth; Semi margins remain intact



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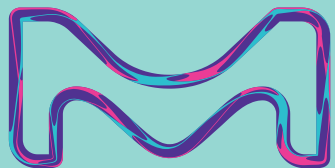


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