

Care Solutions

The Preferred Sustainability Specialties Partner

BofA Global Beautiful Day (virtual) Fieldtrip

May 11, 2023

Yann d'Hervé, Head of Care Solutions



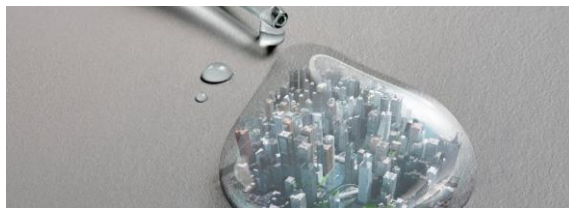
Leading Beyond Chemistry – Growth divisions

Specialty chemicals portfolio with strong positioning and attractive financials

Strong positioning ...

... and attractive financials¹

Specialty Additives






Wide range of additives for **maximum performance** which make the key difference

	Sales:	€4,184 m
	Margin:	23%
	ROCE:	16%

Nutrition & Care



Sustainable solutions for basic human needs in **resilient end markets** like pharma, personal care and animal nutrition

	Sales:	€4,237 m
	Margin:	16%
	ROCE:	9%

Today:
Deep dive Health & Care

Smart Materials



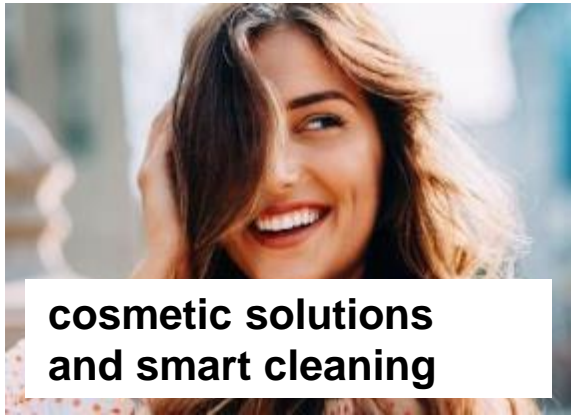


Innovative materials that enable **environmentally-friendly solutions** for mobility, environment and urbanization

	Sales:	€4,833 m
	Margin:	14%
	ROCE:	7%

1: FY 2022

Nutrition & Care – the life sciences division of Evonik

We deliver solutions in markets that make a difference for humans and animals

Markets	 <p>cosmetic solutions and smart cleaning</p>	 <p>health and longevity</p>	 <p>healthy and sustainable nutrition</p>
Business lines	Sales: 2,045 m Care Solutions Health Care		Sales: €2,192 m Animal Nutrition
Division financials FY 2022	Sales: €4,237 m EBITDA: €677 m EBITDA CAGR '19-'22: 14.0%		

Evonik Nutrition & Care Vision 2032

LIFE AT HEART

SYSTEMS IN MIND

PARTNERS AT HAND

B4B-partner in and for life sciences

Human life is at the center of everything we do



Sustainability drives us

Sustainability as the guiding business principle for all decisions



Collaboration defines us

Entrepreneurial thinking pioneers co-creation with strategic partners



Customer-centric System Solutions for complex challenges

Leading beyond chemistry with knowledge-based business models



Innovation inspires us

Combining shared technologies with core competencies



B4B-partner in and for life sciences

Focus on collaborative approaches in highly attractive life science markets

Partnering with:



Care Solutions: Biosurfactants



First world-scale biosurfactant plant

- Construction of a new production plant for bio-based rhamnolipids in Slovakia, scheduled to go on stream 2023-2024
- Fermentation of sugar completely replaces petrochemicals raw materials

Partnering with:

United States
Government



Health Care: Pharmaceutical lipids



New lipid production in Tippecanoe

- New global-scale production facility for pharma lipids for new mRNA-based drugs scheduled to go on stream in 2025
- Project mostly funded by US Government

Partnering with:



Animal Nutrition: Omega-3 fatty acids



Joint venture of DSM and Evonik

- Sustainable alternative for Omega-3 fatty acids for the salmon and pet food industry based on algae
- Large-scale production facility in Blair, Nebraska, USA

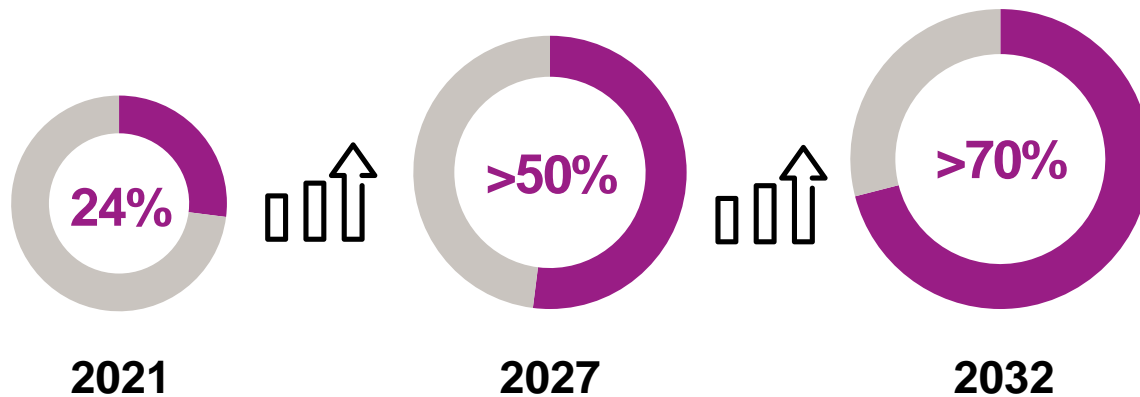
Customer-centric System Solutions

Leading beyond chemistry with knowledge-based business models

System Solutions

Multi-component system combining the creation of products with formulation, application, digital services, ideally fully tailored to holistically address a client need.

Sales share ambition on System Solutions



Examples



Active ingredient retinol for wrinkle reduction with higher stability and bioavailability due to **encapsulation**



Integrated production of lipids, formulation and process development of **lipid nanoparticles** for gene therapies

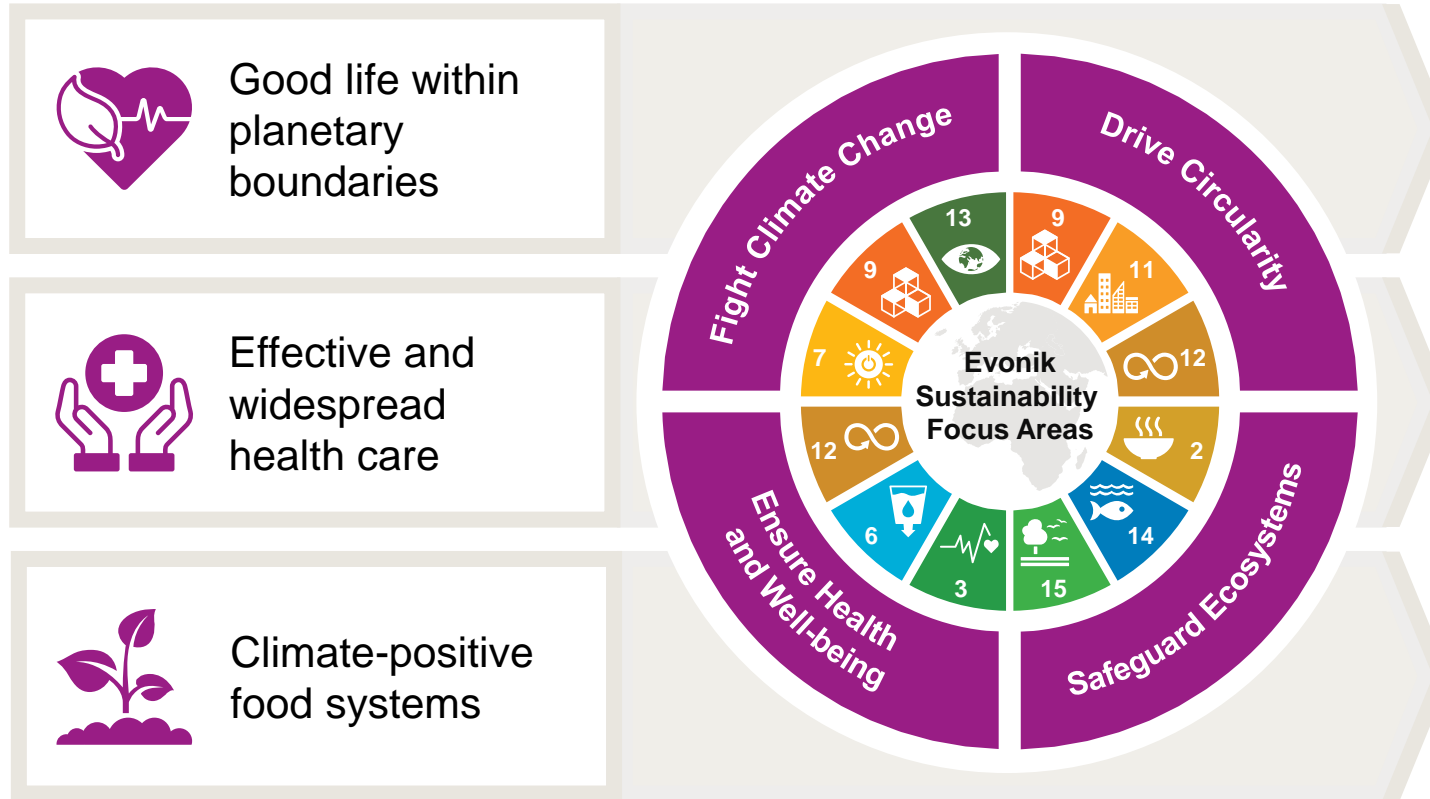


Tailor-made probiotics as an antibiotic alternative embedded in **holistic feeding concepts**

Sustainability drives us

Sustainability as the guiding business principle for Nutrition & Care

Structural market trends



Our solutions

Bio-circular care and consumer solutions through closed carbon loops including biodegradability – achieving the highest functionalities while preserving biodiversity.

Effective medication and treatments for a healthy life that minimizes negative environmental impacts.

Sustainable protein supply through animal farming and aquaculture with positive environmental impacts, animal welfare, and consumer health.

Health & Care

Evonik Health & Care demonstrated increased resilience in 2022



+16%

Sales Growth (yoy)

- **Care:** Growth across all segments: Actives, Cosmetic Solutions, Cleaning and Base
- **Care:** Strong performance in all regions, especially in growth regions Asia and Americas
- **Health:** Increase in oral drug delivery systems, pharmaceutical lipids and cell culture media ingredients



continued

EBITDA Growth
(yoy)

- **Care:** Overall profitability improved with less cyclical and higher return products
- **Care:** Completed divestment of North American Betaine business
- **Health/ Care:** Further optimization ongoing

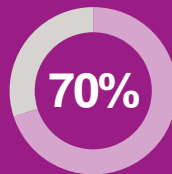
Biodegradable Products



2021



in Care

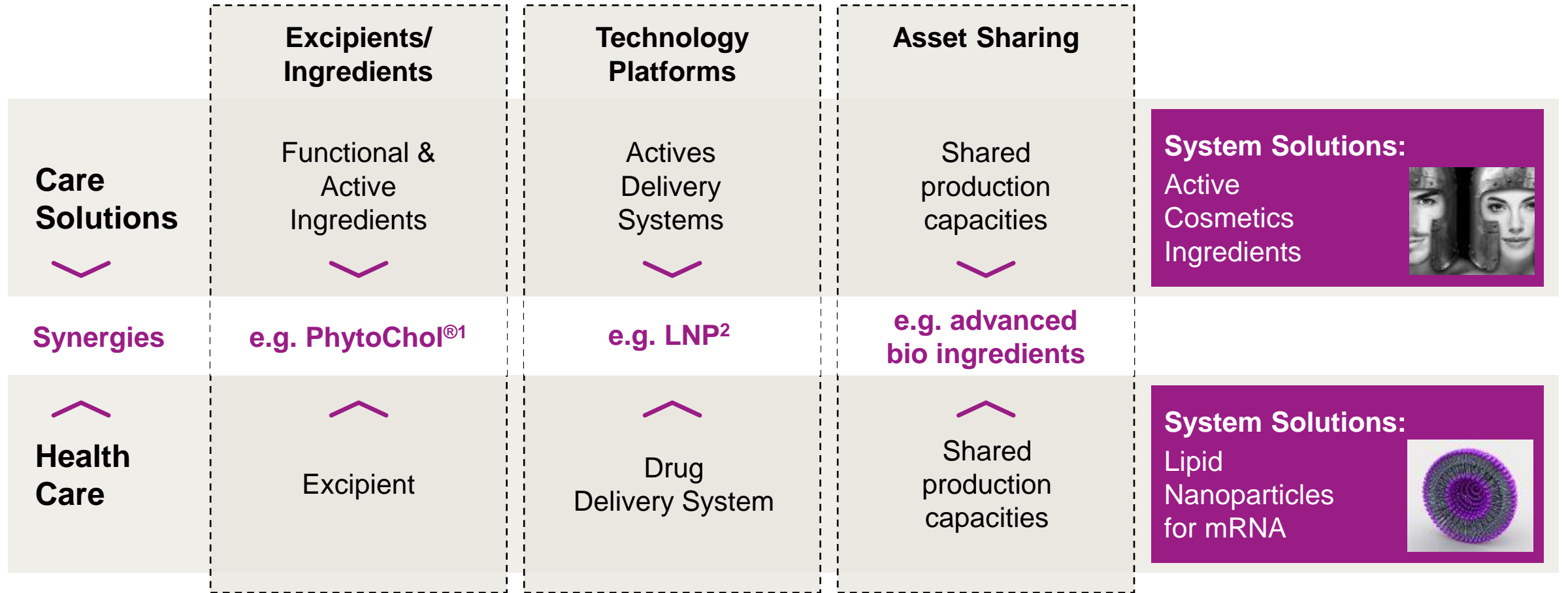


2022

- **Health:** Portfolio transformation has resulted in >30% volume growth for more biodegradable products (e.g. plant based collagen and squalene)
- **Health/ Care:** Biotechnology offers great solutions for a range of applications
- **Care:** We are the global leader in BioSurfactants (Rhamnolipids/ Sophorolipids) and BioActives (Ceramides)

Strong synergies between Health Care and Care Solutions

Synergies based on shared technology platforms and System Solutions approach



1: Plant-based cholesterol used as excipient/ingredient for both Health Care (e.g. COVID-19 vaccines) and Care Solutions (e.g. Advanced Actives Complexes & Systems)

2: Lipid nanoparticles used as delivery system for both Health Care (e.g. mRNA) and Care Solutions (e.g. encapsulation of Retinol)

Lipids: Strong position & synergies as growth driver for Nutrition & Care

>25% CAGR in lipid technologies over the next 5 years

>50%

CAGR over
next 10 years

Lipids for vaccines and mRNA-LNP drug delivery systems

- Proven track record with Pfizer/BioNTech COVID vaccine; project pipeline beyond COVID expected
- Strong footprint in lipid nanoparticles for mRNA delivery technologies

US\$220 million investment in partnership with the U.S. Government to build new lipid production facility for mRNA-based therapies in the U.S.

>25%

CAGR over
next 5 years

Lipids for Cosmetics

- Lipids for active cosmetic ingredients & delivery systems, e.g. ceramides
- Majority of future sales growth secured via contracts

In-house production of ceramides in Germany provides supply security to meet growing demand for ceramides

€1 bn

market size
2030

Biosurfactants

- Rhamnolipids as natural surfactants produced by fermentation
- 1st global world-scale plant with start-up in 2023

Triple-digit million-euro plant for Biosurfactants in Slovakia scheduled to go on stream 2023/2024

Deep dive into Care Solutions

Care Solutions Portfolio

Our strategic goal is to be the preferred Sustainability Specialties Partner

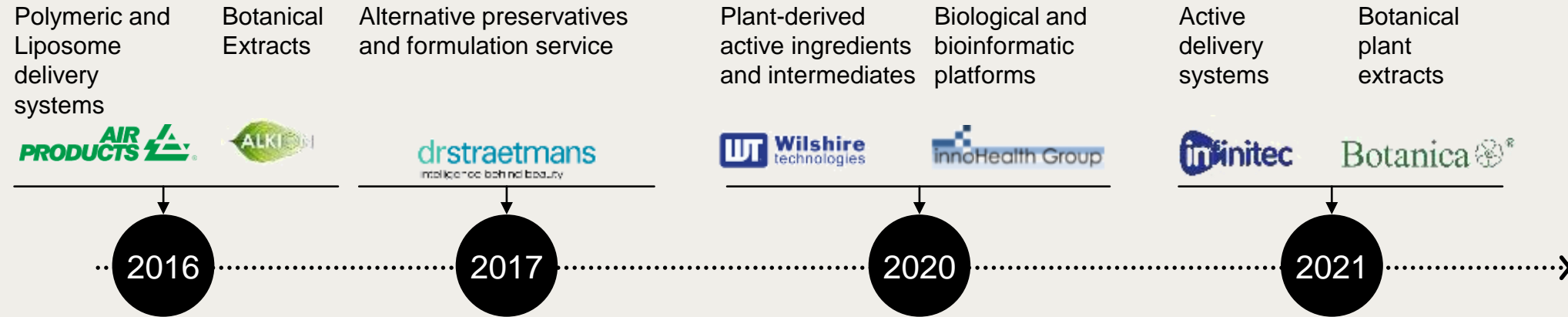
Market segment	Beauty, Personal Care and Cleaning					
						
	Active Ingredients	Active Delivery Systems	Functional Ingredients	Alternative Preservation	Biosurfactants	Cleaning Solutions
Market growth	>7%		>4%	>6%	New market	>3%
Evonik CAGR 2018 - 2021	> 25%		> 6%		New market	stable

- **Attractive markets:** Care Solutions operates in high growth Personal Care market
- **Preferred Sustainability Specialties Partner:** Strong technical competences, market reach and customer intimacy
- **Portfolio shift toward Sustainable Specialties:** Innovation and targeted acquisitions to strengthen System Solutions

Care Solutions Portfolio

Acquisitions and asset restructuring have accelerated the transformation

Acquisitions



Asset restructuring

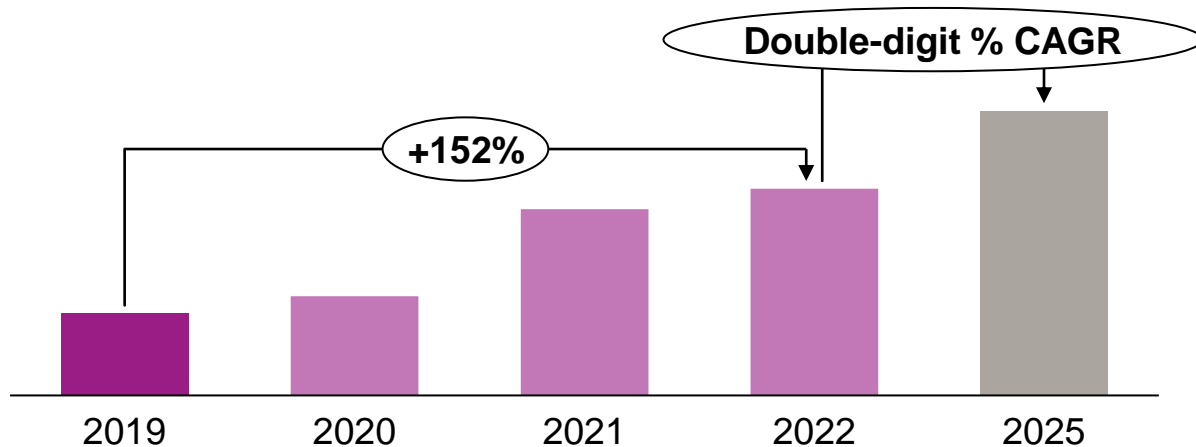


Transformation into THE sustainable specialties partner

Active Ingredients – Strong track record and growth ambition

Shaping and growing the “Actives” portfolio

Sales with Active Ingredients & Delivery Systems







- Continued and will continue double-digit % growth track record
- Successfully started own Ceramide production in Dossenheim (Germany)
- Majority of future sales growth secured via contracts
- Asset-light, attractive EBITDA margin

Being one of the global top leaders in Actives

- Meanwhile **established a broad Actives portfolio** with Ceramides, Peptides, Hyaluronic Acid, Plant Extracts and Delivery Systems.
- Organic growth via **internationalization** and **value selling**
- **Strong innovation engine** to generate new products with scientifically proven claims
- Well positioned to spot and integrate **attractive M&A opportunities** with significant growth and value potential
- **Leverage synergy potential** of acquisitions across cosmetics, cleaning, food & pharma portfolio

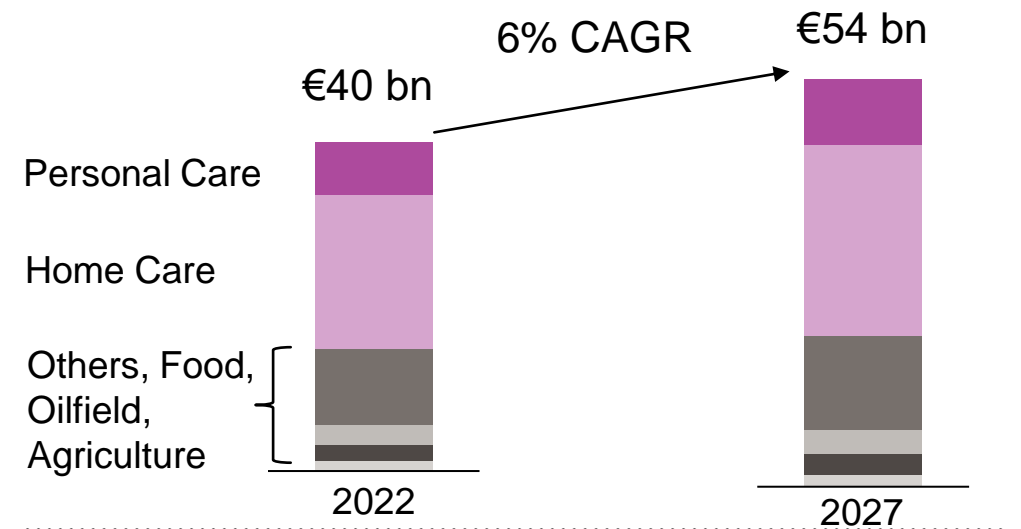
Biosurfactants – Develop new markets through sustainability

Substitute for synthetic/ tropical oil-based surfactants with market size of €40 bn

	Biobased surfactants	Evonik Biosurfactants ¹
Technology	 Synthetic	 Biotech
Feedstock	 Palm oil ²	 Sugar
Performance	Today's benchmark	Will add performance benefits
Sustainability Impact	<ul style="list-style-type: none"> Disadvantages of palm oil cultivation Hazardous raw materials/processes 	<ul style="list-style-type: none"> Biodegradability Bio-processing Best environmental profile

1: Rhamnolipids and Sophorolipids; 2: As well as other tropical oils

Market size surfactants






Biosurfactants Market Potential until 2032

> €1 bn

Division Nutrition & Care

Our strategic management agenda will result in highly attractive KPIs

		Mid-term targets	
 People	Contribute to “One Evonik” goals	Internationality in top management ¹	> 35%
		Females in senior management ¹	> 23%
 Planet	Next Generation Solutions ²		> 60%
 Profit	EBITDA CAGR		> 8%
	Adj. EBITDA margin		> 22%
	ROCE		> 14%

1: Management Circle 1-2 | 2: Products and solutions with a clearly positive sustainability profile that is above or well above the market reference level

Nutrition & Care – A strong value driver for Evonik



- New setup with clear focus on **consumer-oriented end markets** with **science-based** solutions
- **Sustainability** as a guiding business principle
- Strategic management agenda: **Growth - Performance - People**
- Active in **attractive end markets** – with ambition to clearly outgrow relevant markets
- Highly synergistic **technology platforms**
- **System solutions** as growth driver: High level of specialization, high entry barriers and above-average margin potential
- Strategic management agenda to **deliver on financial and ESG targets**



EVONIK

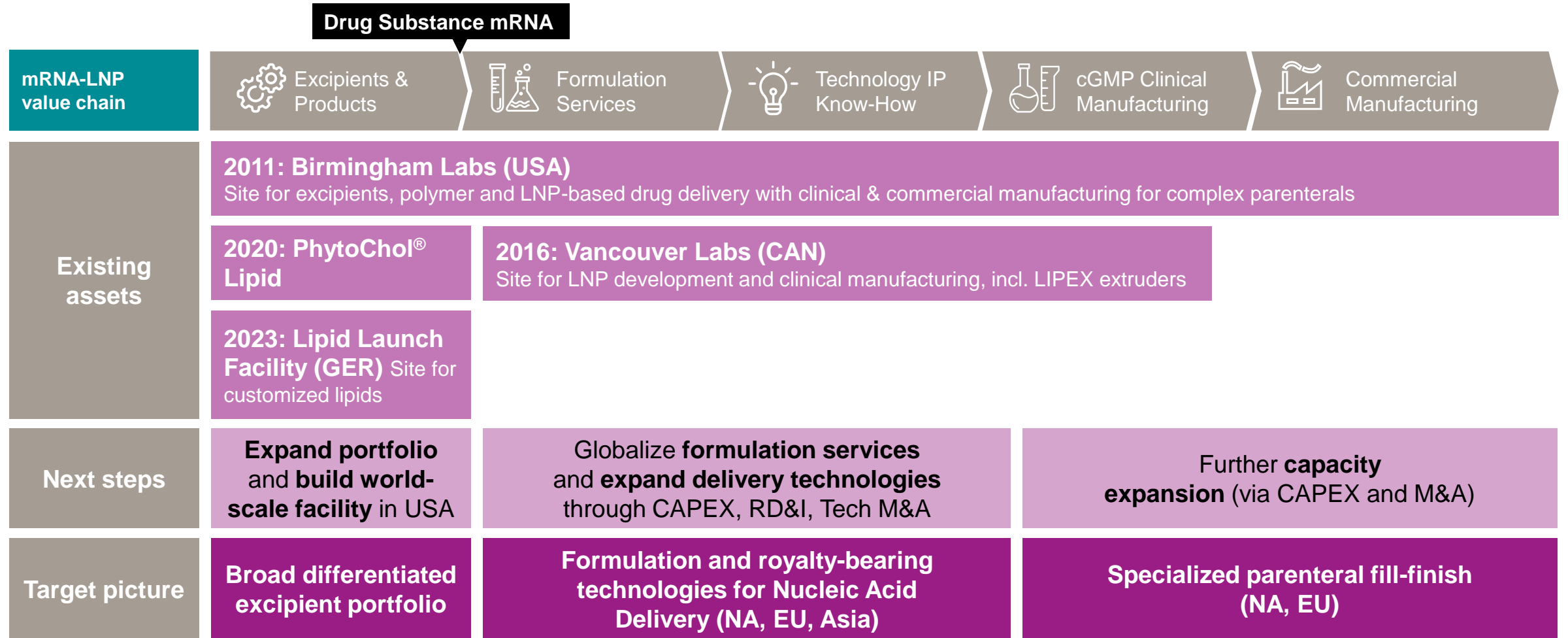
Leading Beyond Chemistry

Backup slides

Deep dive into Health Care

Deep dive Lipid nanoparticles (LNP)

Covering the whole value chain from excipients to contract manufacturing



Lipid Expansion: Getting prepared for new mRNA therapies beyond COVID

€220 m investment at Tippecanoe site in Lafayette, IN, USA

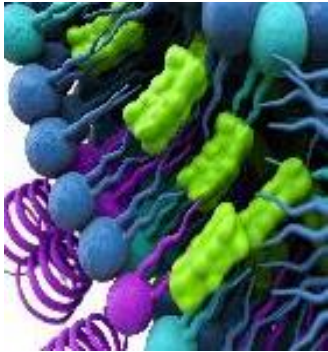
- **Already five small molecule plants including three for HPAPI with total reactor capacity of 860m³**
 - Strong capability for large-scale manufacturing of highly potent drug substances and APIs
- **Lipid Expansion investment** will enable flexible production of lipids
 - Capex of \$220 m
 - US Government funding of up to \$150 m
- Construction start in early 2023, plant is scheduled to go on stream 2025
- Important contribution to the development of new mRNA therapies beyond COVID-19 vaccines



Strong growth ambition for drug delivery business

Growth potential for mRNA-based cell & gene therapies

Other recent highlights from Evonik's lipids business

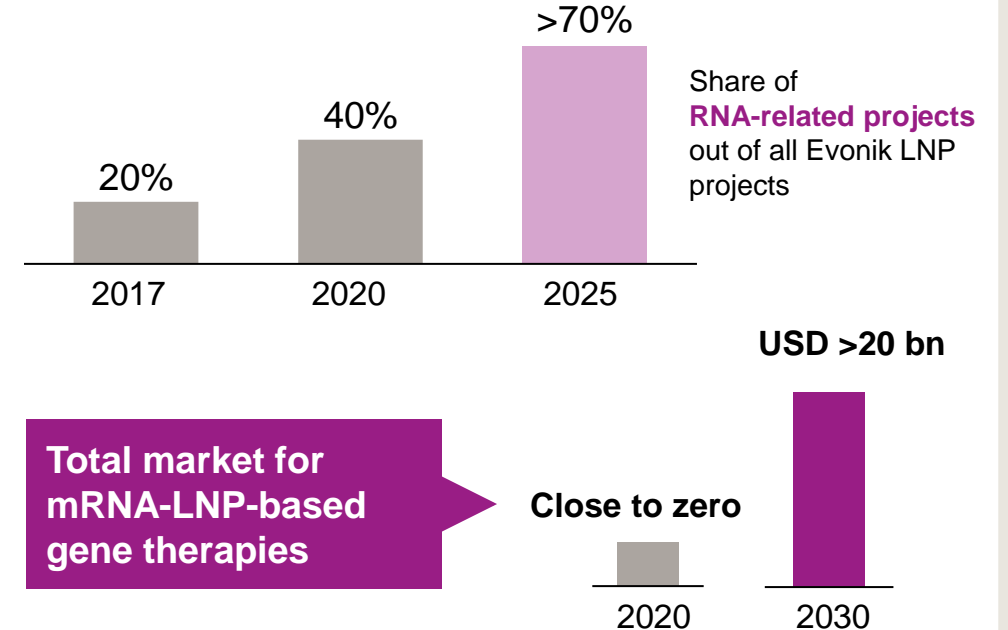


- PhytoChol®, plant-based cholesterol, used by a number of companies in the mRNA space
- Evonik is the world's largest producer of this lipid



- Lipid Launch Facility in Hanau for flexible support of early-stage development projects
- Customized lipids for mRNA therapies in clinical and commercial phases will soon be coming from Hanau

Evonik's LNP solutions enable RNA-based medicines



Sustainability drives us

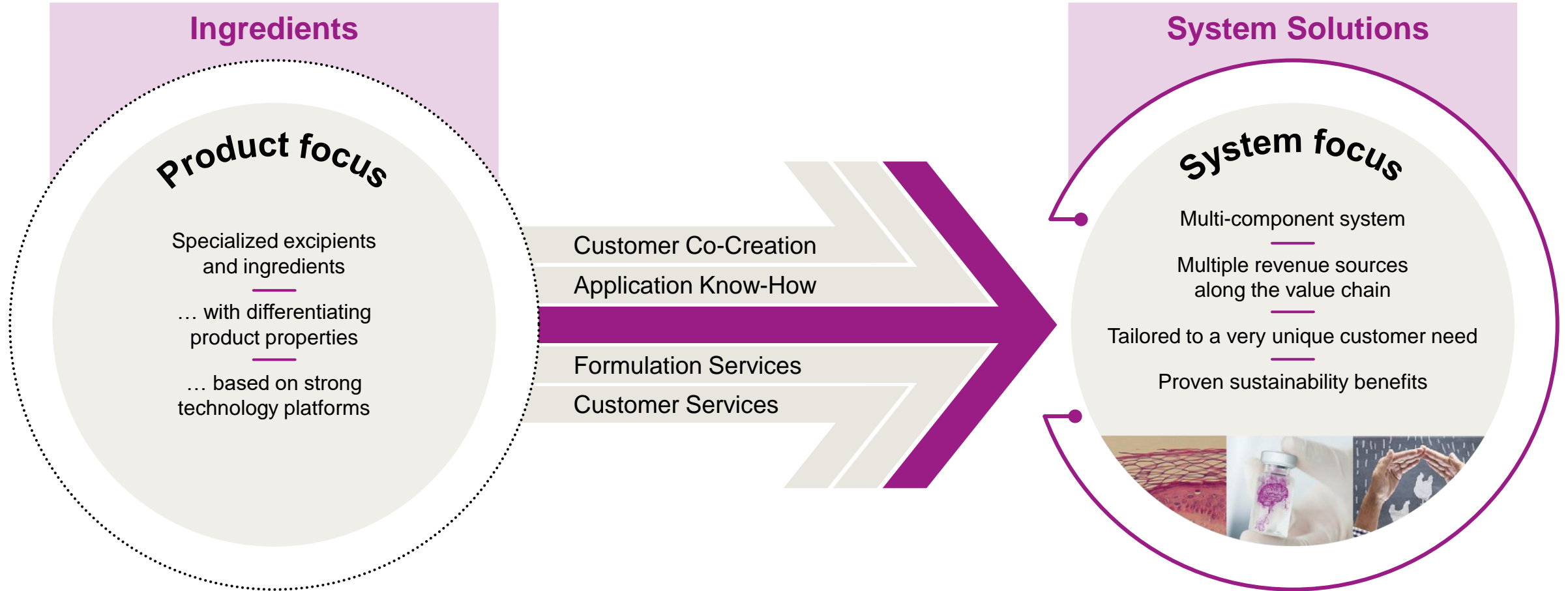
Substantiated by clear objectives focusing on footprint, handprint and heartprint

	Fight Climate Change	Drive Circularity	Safeguard Ecosystems	Ensure Health & Wellbeing
Footprint	<ul style="list-style-type: none"> -25% scope 1 & 2 by 2030 -11% scope 3 by 2030 100% renewable sourced electricity Be climate neutral for all emission scopes by 2050 	<ul style="list-style-type: none"> -10% specific production waste Significant increase in bio-based and circular raw materials 	<ul style="list-style-type: none"> -3% specific freshwater intake Site-specific action plans for water-stress production sites 100% RSPO MB certified palm oil / derivatives by 2025 	<ul style="list-style-type: none"> -20% other emissions to air Maintain low risk exposure to “Hazardous Chemicals of High Concern”
Handprint	<ul style="list-style-type: none"> Avoided fossil emissions Biogenic based products 	<ul style="list-style-type: none"> Renature with increasing share of biodegradable products 	<ul style="list-style-type: none"> Reduced eutrophication and acidification in product use phase Land use savings in product use phase 	<ul style="list-style-type: none"> No of patients or vulnerable consumers reached with health outcomes Enable customers to replace chemicals under discussion
Heartprint	<ul style="list-style-type: none"> Proactive, transformational influence exerted internally and externally 			<ul style="list-style-type: none"> Moving entirely from attitude to real action
				<ul style="list-style-type: none"> Entrepreneurial thinking defined by collaboration with strategic partners

1. RSPO MB: Roundtable on Sustainable Palm Oil Mass Balance

Growth – Strategic portfolio shift towards “System Solutions”

Portfolio upgrade towards higher specialization and higher returns



Growth – Focusing on shared technology platforms

Strong synergies and joint resources across all three businesses

Technology Platform	Care Solutions		Health Care			Animal Nutrition	
	Smart Cleaning	Cosmetics	Medical Devices	Pharma	Nutraceuticals	Sustainable Nutrition	Digital Livestock Management
Microbiome modulation		■		■	■	■	
Biotech test systems		■		■	■	■	
Biotech processes	■	■	■	■	■	■	
Delivery systems		■	■	■	■	■	
Particle design		■	■	■		■	
Digital platforms		■		■	■	■	■

■ Already active ■ Expansion area

Benefits of setup

- Broad **technology overlap** and **competence leveraged** across all three businesses
- Reduced **time to market**
- High **capital efficiency**
- High degree of **innovation**

Complemented by our own innovation and selected M&A

Technology Platform Example – Biotechnology

>30 years of broad and differentiating competencies in white biotechnology

Biotechnology – Process Excellence and Launched Products

	Care Solutions	Health Care	Sustainable Nutrition
Microbiome Modulation	Microbiotic actives to support skin barrier function	Probiotics and Gut Health Solutions	
Biotech Processes	Non-animal derived Collagen	Cell Culture	Natural algae-based omega 3 fatty acids
	Actives (e.g. Ceramides)	CDMO (e.g. fermentation-based proteins)	
	Biosurfactants	Amino acids pharma grade	Bio amino acids

Sales potential from biotechnology platform of ~ €1 bn by 2030 latest

BIOSURFACTANTS: Evonik invests in Rhamnolipids to continue its lead in growth and innovation in the attractive biosurfactants market.

Unique Technology: Sustainability Focus

- Evonik invented the first **commercial biotechnological production process** based on natural ingredients.
- Evonik will continue to expand its portfolio of biotechnology-derived ingredients to strengthen its position as a **leading provider of sustainable solutions** that are able to excite both suppliers & consumers of household cleaning and cosmetic products.



Biotechnological process



Traceable and responsible sourcing



Low aquatox



Nature-identical structure



100% Sugar-based ingredient



100% Biodegradability



Fulfilling today's and tomorrow's consumer needs

Powerful performance

- Excellent foaming
- High cleansing/degreasing
- Hard water resistant



Pleasant and mild

- Mild to the skin
- Pleasant skin feel
- Creamy foam






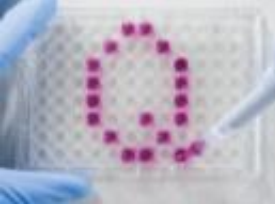

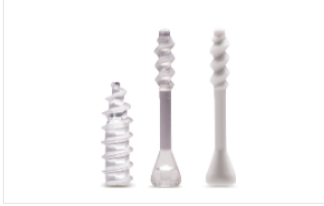
Strategic Partnership: Clean Future Initiative

Evonik and Unilever are in a **long-term collaboration** for the commercial manufacturing and supply of Evonik's rhamnolipids for use in a range of Unilever's green household cleaning products.



Health Care Portfolio

Attractive portfolio with high level of synergies and access to fast-growing markets

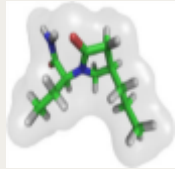
Health Care						
	Pharmaceutical				Nutraceutical	Medical Devices
Market segment						
	Drug Delivery Systems	Contract Manufacturing & API Synthesis	Pharma Amino Acids	Cell Culture & Tissue Engineering	Advanced Food Ingredients & Nutraceutical Coatings	Biomaterials & Application Technologies
Market growth	>6%	>4%	>4%	>8%	>7%	>4%

- **Attractive markets:** Health Care operates in high-margin, fast-growing markets
- **Reliability and quality:** Track record for specialized system solutions based on products, technologies, and services
- **High level of synergies:** Shared competencies and technology platforms across pharmaceutical, nutraceutical & medical device markets

mRNA technology has the potential to revolutionize the pharma industry

mRNA drugs allow the active ingredient / protein to be produced directly within the body saving costs and time

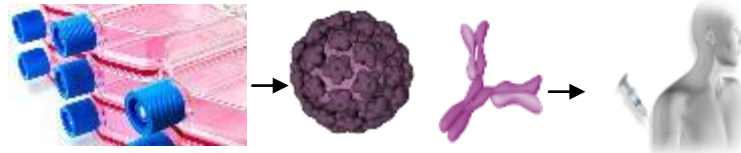
PAST – Chemical



Chemically synthesized small molecules

- Synthetic production using complicated building blocks
- Testing millions of compounds necessary

PRESENT – Biological



Recombinant Proteins/Antibodies

- Since ~20 years (10-20% of market)
- Biologically produced outside the body
- Challenging development for each individual drug
- Cost and time intensive production

FUTURE – Nucleic Acids



Next generation biologicals

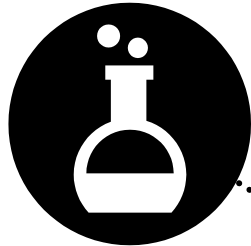
mRNA Therapeutics

- **Patient's body produces therapeutic itself**
- Protein produced in the most native way
- Fast development process
- Technology platform with synergies – every product based on same principle
- Future applications for individualized medicine

Evonik builds new, highly flexible, production facilities for critical pharmaceutical lipids enabling mRNA medicines

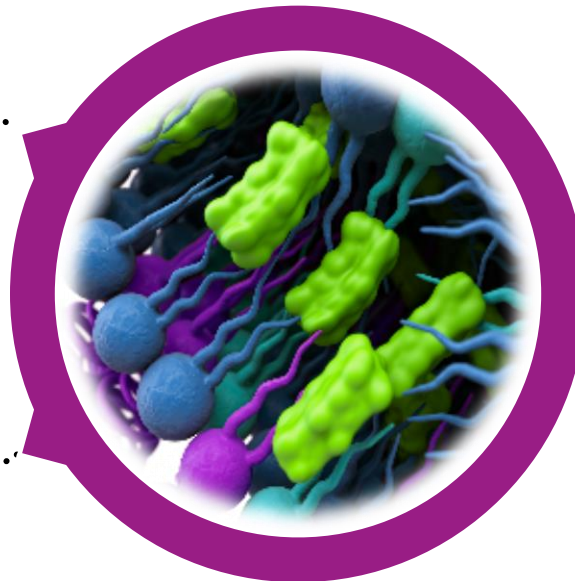
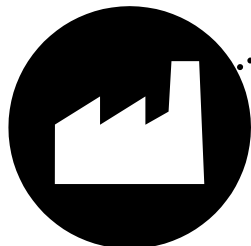
Lipid Launch Facility Hanau, Germany

- Flexible support of early-stage development projects



Lipid Center of Excellence Lafayette, IN, USA

- Global-scale and multi-purpose production facility for pharmaceutical lipids



Lipid Production Facilities

- Expansions will supplement current capabilities in Germany
- Allows for flexible production of a wide range of high-quality standard and customized lipids
- Capacities ranging from multiple gram to low kg to MT scale
- Enables smooth transition of development projects from R&D to clinical phases and market launch
- BARDA¹ provides funding to strengthen U.S. vaccine preparedness

¹ The Biomedical Advanced Research and Development Authority



EVONIK

Leading Beyond Chemistry