



sustainability at MERCK KGAA, Darmstadt, Germany

Sustainability Team

CMD 2022 in Darmstadt, Germany
October 6, 2022
1:30 pm – 2:30 pm



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CMD 2022: Sustainability Session

Presentations



Petra Wicklandt

Introduction on sustainability at Company



Andreas Polomski

Update on climate action



Jeffrey Whitford

Sustainable product portfolio



Manfred Klevesath

Access to Health & Global Health



Bianca Harnischfeger

Sustainable Supply Chain Management



Renee Connolly

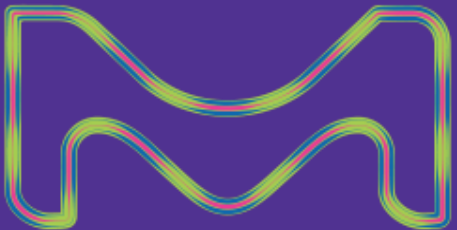
Diversity, Equity & Inclusion at Company



introduction to sustainability

Petra Wicklandt

Head of Corporate Sustainability,
Quality and Trade Compliance



Introduction to sustainability at Merck KGaA, Darmstadt, Germany

We have committed ourselves to 3 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



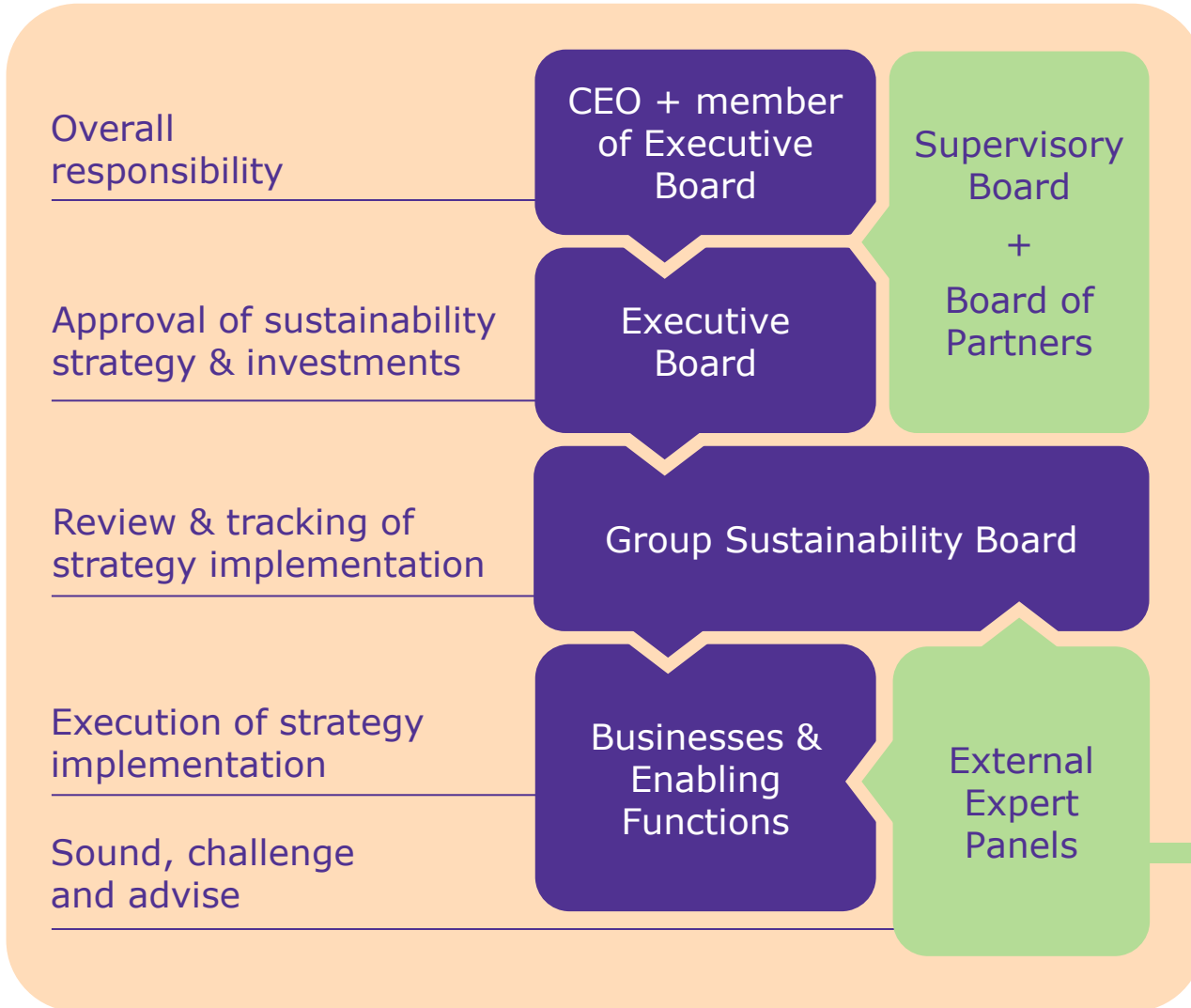
Water and resource intensity

Focus SDGs



Introduction to sustainability at Merck KGaA, Darmstadt, Germany

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

Company policies, e.g.:

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



Introduction to sustainability at Merck KGaA, Darmstadt, Germany

Strategy implementation activities on track

2020

2021

2022

2023

...

2030

Phase 0 | Preparation

Strategy definition & rollout

- Define strategic goals
- Build focus areas
- Establish committees and structures
- Prepare for realization

Phase 1 | Enablement

Learn, exercise, integrate

- Expand on sector sustainability strategies
- Implement sustainability governance
- Establish metrics and targets
- Increase transparency, reporting
- Launch tools and initiatives, e.g.:
 - ESG database
 - R&D sustainability scorecard
 - Supplier decarbonization program
 - Access to health: Equitable Value and Access Strategy

Phase 2 | Transformation

Evolve, transform, differentiate

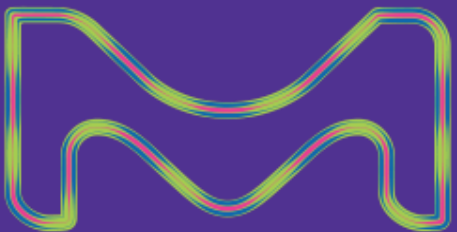
- Build a sustainability culture and mindset
- Include sustainability in our value chains, incl. innovation processes
- Data-based sustainability: measure, model, steer
- Decouple business growth from negative environmental impact wherever possible
- Aim to achieve our 2030 targets



update on climate Action


Andreas Polomski

Head of Climate Action



Climate action

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

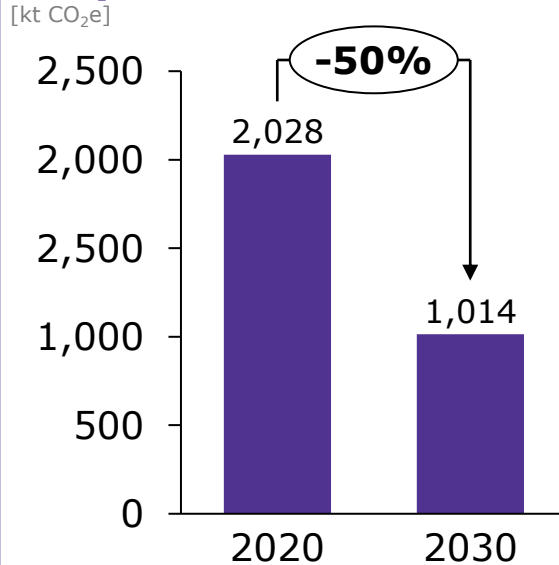
	SBTi ¹ near-term target 2030	Climate neutrality target 2040	SBTi ¹ Long-term net-zero target 2050
Scope	Effect of all reportable greenhouse gas emissions ²	Effect of all reportable greenhouse gas emissions ²	Effect of all reportable greenhouse gas emissions ²
Abatement	<p>Scope 1+2 ambition</p> <p>Absolute 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



Climate action

Decisive levers to reaching our near-term target – progress on track

Scope 1&2:



Scope 1: Main lever NF₃ process emissions

- Technical abatement solution successfully piloted for NF₃
- Investment for retrofitting existing plants earmarked
- Future capacity expansions only with build-in abatement solutions

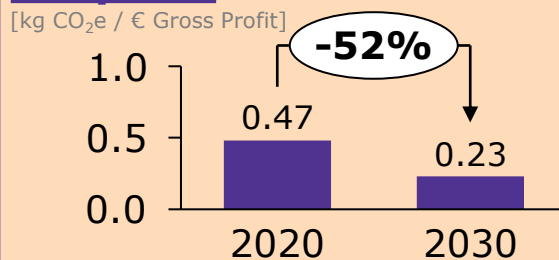
Additional levers: Other process emissions, energy efficiency, etc.

Scope 2: Main lever renewable energy

- Target: Cover 80% of our purchased electricity with renewables by 2030
- In 2021, 30% of purchased electricity covered by renewables

Additional levers: Energy efficiency

Scope 3:



Main lever Supplier decarbonization

- Tailored follow-up with suppliers surveyed in first wave
- Second wave of suppliers contacted with survey

Use of sold specialty gases at customers

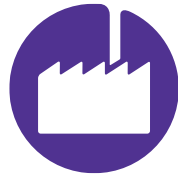
- Collaboration with Micron to develop alternative etching gases with a low GWP¹



Climate action

Ensuring continuous and coordinated action towards our climate targets by anchoring decarbonization within our organization

Integrating climate targets into **CapEx process** e.g. internal CO₂ price

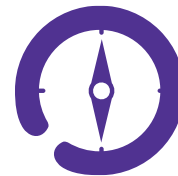


Enablers of decarbonization



Making sustainability (including GHG emissions) part of the **R&D process**

Implement **technical requirements** for GHG¹ reduction on project level, e.g. climate risk assessment for new buildings



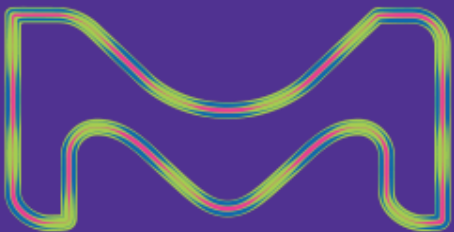
Linking climate targets and **executive compensation**



sustainable product portfolio

Jeffrey Whitford

Head of Sustainability
& Social Business Innovation
Life Science



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

3	8	9	17
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Creating sustainable value chains 2

Sustainability in supply chain and operations by 2030

8	12	17
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Reducing ecological footprint 3

Achieving climate neutrality by 2040

9	12	17
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Design for Sustainability: Greener alternative products

Sterile filtration – without the funnel

AFTER



Stericup® E sterile filters

Reduced plastic lab waste

to respond to customer feedback and reduce resource use

Same quality and performance

with minimal changes to workflow

BEFORE



Up to **26%**
less plastic

10.5 tons² CO₂
cut in 2021

Up to **20%**
less corrugated &
plastic packaging

FSC¹-certified
corrugated packaging



Design for Sustainability: Greener alternative products

Environmentally-friendly water filtration

Milli-Q® IQ 7000 Ultrapure Water System

Gold-standard water filtration system for sensitive analytical techniques in the life science industry

Less electricity, less packaging, less water consumption during quality control, and **mercury-free** UV lamps

- 18%** less system weight
- 33%** less plastic for purification cartridges
- 35%** less system electricity consumption



AFTER



BEFORE



Design for Sustainability: Greener alternative products

Using green chemistry to develop safer solvents

Cyrene™ solvent

A **bio-based** dipolar aprotic solvent **for a circular economy**

AFTER



Safer, more sustainable alternative to petroleum-based DMF and NMP—both categorized by REACH as substances of very high concern

Renewable

raw material: sawdust

5X smaller CO₂ footprint than NMP

BEFORE



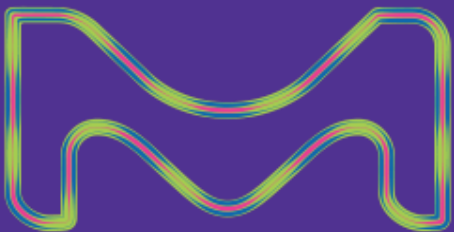
Cyrene™ can cut **850,000+** tons² of CO₂ annually when replacing NMP¹ from other suppliers



ACCESS TO HEALTH & GLOBAL HEALTH

Manfred Klevesath

Head of Global Health,
Bioethics and Digital Ethics



Access to health & global health

Our strategic priorities



Fight against schistosomiasis, a neglected tropical disease



Catalyze innovative solutions for global health challenges



Expand access to Group's healthcare portfolio in low- and middle-income countries



Access to health & global health

Integrated strategies to fight schistosomiasis and malaria

We aim to **eliminate** the worm disease **schistosomiasis**



We help deliver integrated **health solutions against malaria**

- WASH¹ initiatives: supporting water, sanitation and hygiene interventions

Transmission control

- Help prevent the spread of malaria by further development of efficiency of our insect repellent IR3535®

- Blood-based rapid diagnostic test
- AI-based diagnostics

Detection

- Provide new differential fever-related diagnostics

- Donation of >1.5 bn praziquantel tablets to WHO
- Developing a pediatric formulation of praziquantel (Availability 2022e)

Treatment

- Drug discovery and development activities for new anti-malarial treatments (Plasmodium eEF2 inhibitor)

- Health education project in Ethiopia has reached 250,000 people since 2017
- Women's health support

Health systems & education

- Clean water platforms to local health centers and communities in Africa

- Global Schistosomiasis Alliance
- NALA² Foundation

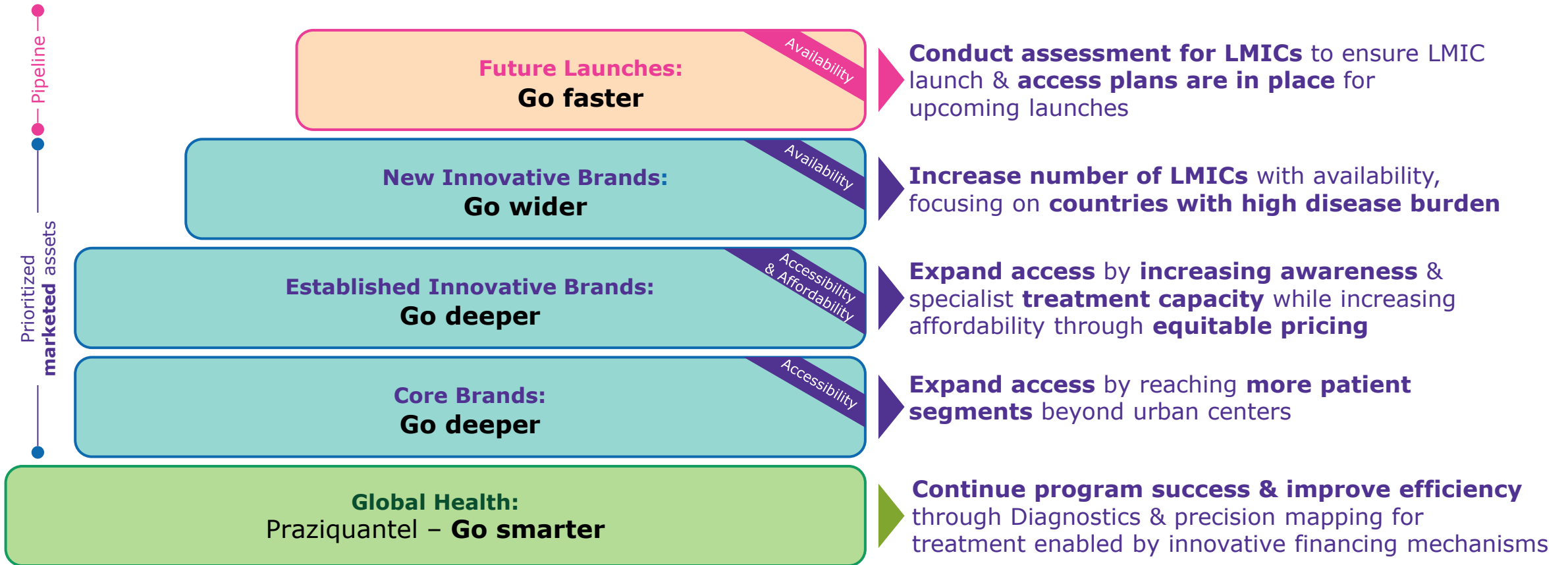
Collaboration & Advocacy

- Pan-African Vivax and Ovale³ network of centers of excellence



Access to health & global health

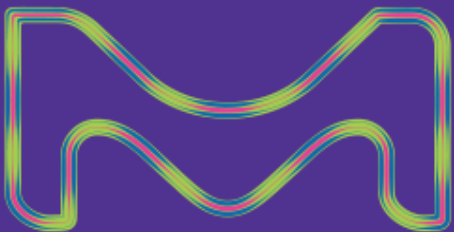
A focused leadership approach to access for health in LMICs¹



sustainable supply chain Management

Bianca Harnischfeger

Head of Procurement
Governance & Solutions



Supply chain management

Sustainable and transparent supply chain

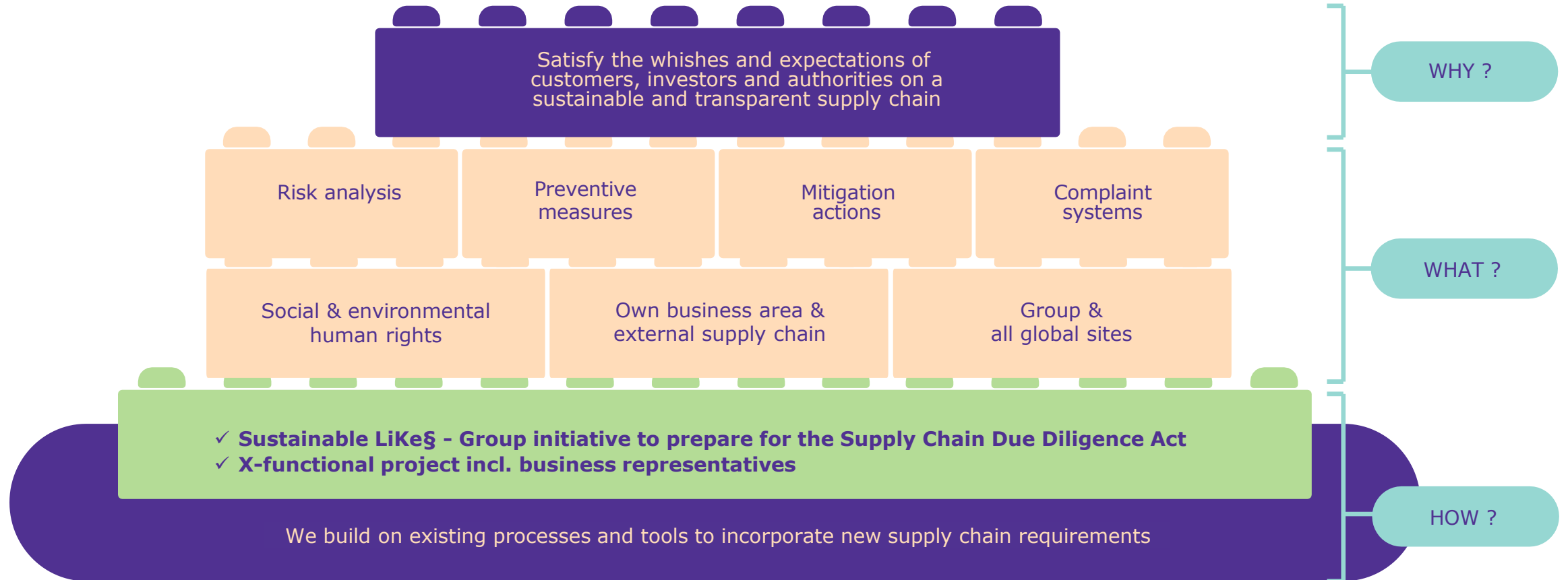
- Continuous improvement of relevant strategies, processes and guidelines to **prevent violations of supply chain standards**
- **We expect our suppliers to comply with** standards defined in **our Supplier Code of Conduct**
- We are a member of the industry initiative **Together for Sustainability** (TfS) and recently joined the **Pharmaceutical Supply Chain Initiative** (PSCI)

One of the goals of our supplier management endeavors is **compliance with fundamental environmental and social standards**, in addition to high-quality, reliable delivery and competitive prices.



Supply chain management

Get ready for the German Supply Chain Due Diligence Act



Supply chain management

Sustainability key performance indicator



- **Group Procurement** works closely with suppliers to **achieve a sustainable and transparent supply chain** (Goal 2).
- Our **Sustainability KPI follows a risk-based approach**, focusing on **relevant suppliers** who either represent a specific **country and industry risk** or contribute to a major part (min. 50%) of our purchase volume.
- We **leverage** efforts by **industry initiatives** such as TfS¹ and PSCI² **in combination with assessments** such as EcoVadis to achieve the envisioned transparency in our supply chain for **almost our complete spend** volume (98%).

target

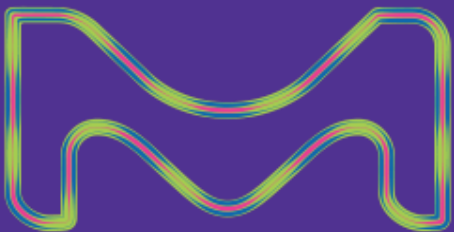
We **measure** these key indicators using two equally weighted metrics: **coverage in terms of purchase volume** (2021: 65%) and the **number of suppliers** (2021: 21%).



Diversity, Equity & Inclusion at Merck KGaA, Darmstadt, Germany

Renee Connolly

Chief Diversity, Equity & Inclusion Officer and
Head of Innovation HR Engagement & Inclusion



Diversity, Equity & Inclusion

Keys to our success



Diversity

Everyone is invited to the party - We embrace the rich mix of our people.



Equity

Everyone can contribute to the playlist - We work to identify and eliminate barriers.



Inclusion

Everyone is welcome to celebrate - Together, we are building ONE Group.

At Group, DE&I is not a "topic". It is not an "issue". It is not a "hobby".

It is a **business and people imperative**, securing our role as a science & technology leader, supporting our "25by25" ambition.



Diversity, Equity & Inclusion

Our aspirations for 2030 drive our business forward...

...and create belonging for our people.

Inclusion

Offer training to all people leaders on inclusive leadership

Focus on employee listening to drive high-impact culture

Culture and Ethnicity

Increase share of leaders from Asia, LATAM and MEA to 30%

Increase share of underrepresented racial and ethnic groups in US leadership to 30%

Gender

Achieve gender¹ parity in leadership positions

Ensure fair and equitable pay for all employees

purposeful actions

Surveys and **trainings** launched to promote inclusivity

DE&I **region network** to share best practices

Global initiative to support internal **employee networks**

Collaboration to fund **under served communities**

Global **pay equity** analysis

Focus on diversity in **talent acquisition**



Diversity, Equity & Inclusion

Purposeful actions have led to measurable progress

we deliver on our DE&I aspirations

Inclusion

49%

of people leaders participated in Inclusive Leadership workshop since program start in 2021¹

60+

Internal DE&I employee groups and networks¹

Culture and Ethnicity

CNote

Investment in CNote initiative, funding under served communities and small businesses owned by underrepresented ethnic groups¹

142

Number of nationalities among employees²

Gender

36%

Women in Leadership, on track towards gender parity aspiration²

<1.5%

Minimal adjusted gender pay gap²

We make a difference to our people and the communities around us. So we can proudly say: **I belong at Merck KGaA, Darmstadt, Germany**



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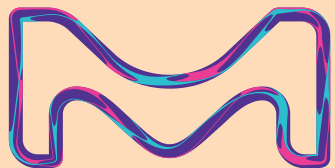


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