



SIEMENS ADVANTA & DTG

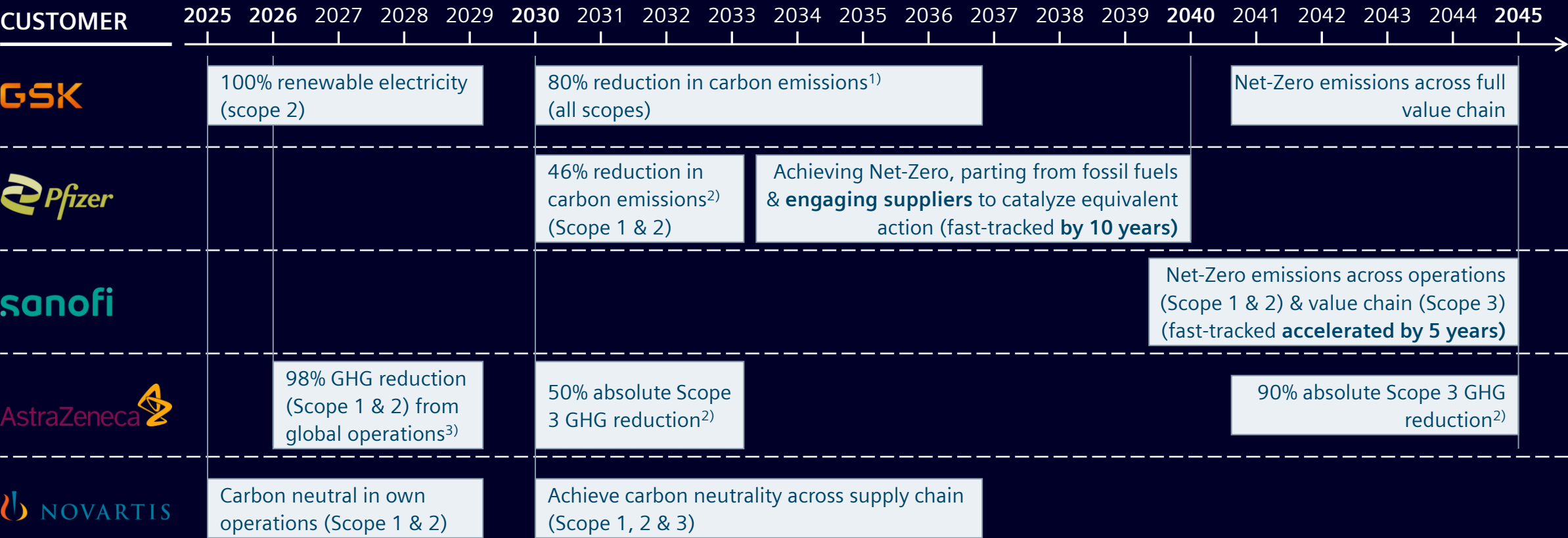
Scope 3 Baselineing / Reduction Strategy

Offering Overview



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Life science players are adopting / accelerating stringent Net-Zero timelines



Having a carbon neutral supply chain is no longer "desirable" but is "business critical" in the life science industry;
Push to move from tactical "sustainability" initiatives to a holistic sustainability approach

However, Scope 3 transparency remains a significant challenge



Net zero and sustainability reporting and transparency requirements for life sciences companies have **increased significantly** in recent years



Sustainability teams are spending significant time / effort addressing these requirements



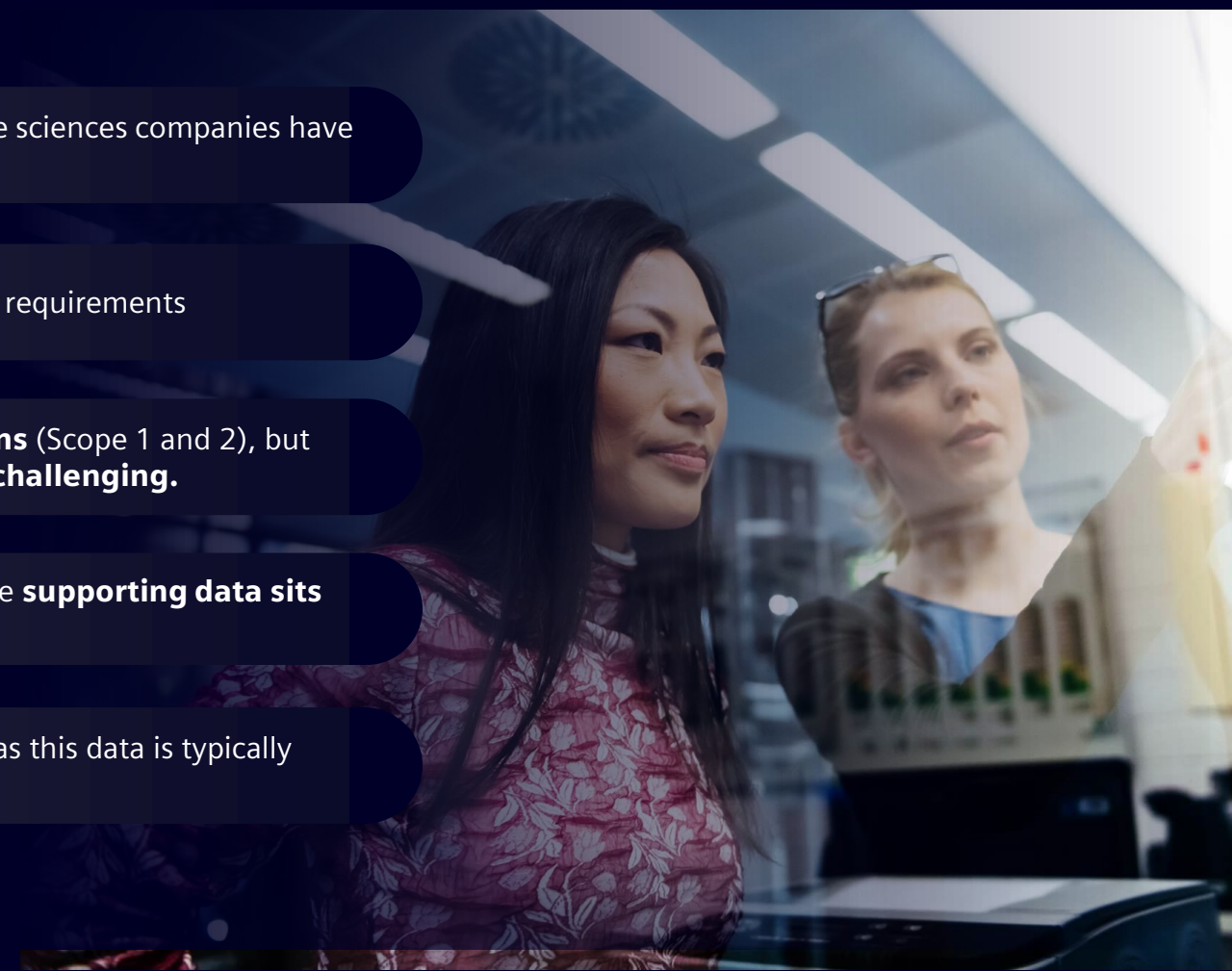
Companies have **established transparency around their own emissions** (Scope 1 and 2), but understanding **Scope 3 emissions is significantly more complex and challenging.**



Scope 3 emissions are typically 20 times higher than Scope 1 and 2, and the **supporting data sits outside the company's direct control** and more difficult to assess.



Suppliers are often reluctant to provide transparency to customers, as this data is typically considered commercially sensitive.



Siemens & DTG can enable Life Science players on suppliers' emissions baselining, followed by a ready-to-implement decarbonization roadmap

1 End-to-end capabilities from strategy to execution



- **Experienced consulting team** with deep knowledge of strategy, digitalization and operations
- **Proven approach** combining digital tools, advisory capabilities and organizational enablement
- **Comprehensive solution and consulting portfolio** to support sustainability endeavors

2 Proven experience with life science players



- **Strong expertise** across the **pharma and discrete mfg. sectors**
- **Deep domain experience** in **API manufacture and external supply chain management**
- **Strong presence** in **UK&IE ecosystem**
- **Proven track record** in providing solutions for life science industry

3 Track record in baselining, decarb. strategy and implementation



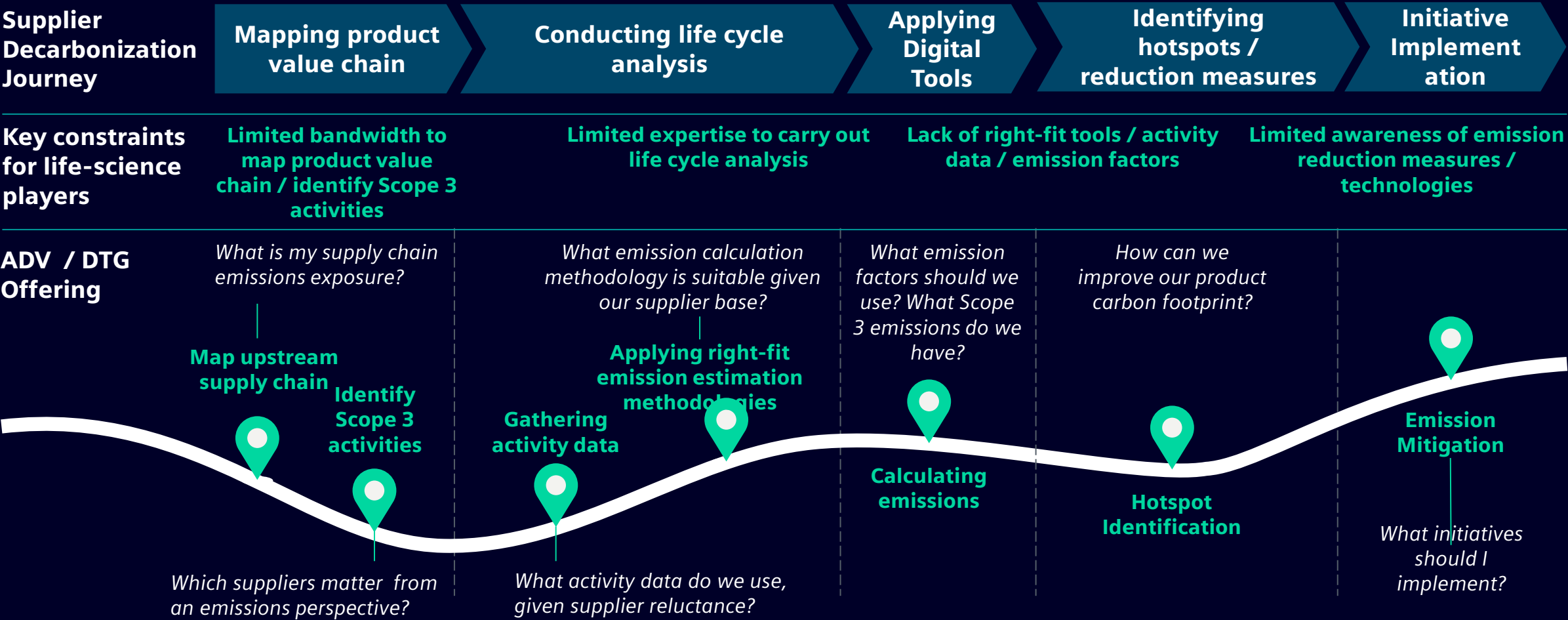
- Conducted **emissions baselining** and developed **decarbonization roadmap** for life science players
- **Reduced CO₂ emissions by 4400 Tons** by implementing digitalization measures for a **pharma client**
- **Reduced emissions by ~20%** for a brownfield facility of a **French pharmaceutical player**

4 Longstanding commitment to sustainability



- Strong sustainability commitment and own practitioner experience
- Siemens implemented **decarbonization measures** across own operations and **adopted a Net Zero supply chain target of 2050**
- Deployed **digital tools** to help **track emissions & share best practices**

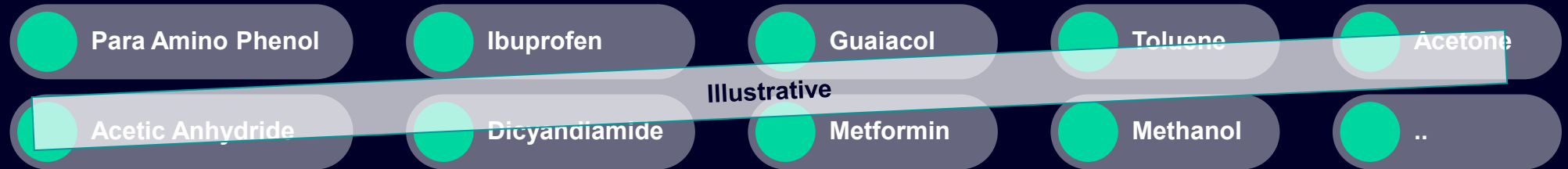
ADV & DTG provide an end-to-end offering



We have a credible methodology to assess Scope 3 emissions and create transparency for LifeScience customers

1

Identify key materials for Scope 3 inventorization



2

Determine appropriate calculation method

1. Supplier-specific method
Requires **product-level CTG GHG inventory data** from suppliers

2. Hybrid Method
Employs a **combination of supplier specific activity data** (wherever available) and **secondary data**

3. Average-data method
Estimate emissions by multiplying **quantity of purchased goods/services** & relevant **secondary EFs**

4. Spend-based method
Estimate emissions by multiplying **economic value** of purchased goods & services and relevant **secondary EFs**

3

Select data / emission factors / gathered

 **Company data**
(e.g., quantity procured, origin etc.,)

 **International standard databases / research reports**
(e.g., Ecolnvent, DEFRA etc.,)

 **Inputs from suppliers**
(e.g., RoS, fuel / energy used, distance travelled etc.,)

4

Calculate GHG Emissions



CTG: Cradle-To-Gate; EFs: Emission Factors; RoS: Route of Synthesis | Source: Greenhouse Gas Protocol, Pharmaceutical Supply Chain Initiative ([Link](#)), Siemens

Case Study: Net Zero Strategy development for a leading pharma player in India, including on-site technical assessment, Scope 3 Estimation and determining PCF



**Regional scope**

India

**Industry**

Pharmaceuticals

**Project focus**

Decarbonization strategy

Context

- Pharma player with target of **net-zero carbon by 2050**, given customer push and regulatory requirements

Approach

- Scope 1 / 2:** Identified measures to decarbonize emissions for 2 large pharma facilities (API / PFI / FD) via **technical assessment** of select assets viz. HVAC, Boilers, AHUs, Air Compressors and other major utilities
 - Developed investment case** including detailed engineering with BOQ summary for shortlisted measures
- Scope 3 Estimation:** Conducted assessment to quantify (via bottom-up estimation) Scope 3 emissions as per GHG protocol
 - Assessed 11 Scope 3 categories, including 18,000+ raw materials, 350+ suppliers across 7 manufacturing plants
 - Recommended Scope 3 emission reduction** strategies across Scope 3 categories including supply chain, waste generated, transport / distribution, travel
- Determined product carbon footprint** for 5 products (with 70+ variants), via bottom-up allocation of Scope 1 / Scope 2 emissions at a facility / block level, for steam / coal / electricity
- Defined Net-Zero Roadmap**, with detailed initiatives / actions

Expected impact

- Defined baseline on Scope 1 / 2 / 3 emissions** across facilities and **Product Carbon Footprint** for select products



- Product Carbon footprint (PCF)** for 5 key products (~70+ product variants)



- Defined carbon reduction initiatives** and implementation roadmap, with detailed investment cases and engineering analysis to enable Net-Zero within 10 years



We have inhouse sustainability tools (e.g., Sustainability Leadership Tool) to enable Scope 3 baselining and hotspot identification

PHASE

(Pharma Sustainability Excellence)

A digital carbon scenario modelling platform purpose-built to analyse and explore product carbon footprints

- Instant identification of carbon “hotspots” across your entire supply chain
- User-friendly format designed for adoption across all teams and departments
- Interactive visuals enabling fast scenario modelling and identification of reduction opportunities
- Real-time visual insights to explore “what-if” scenarios and assess potential impact





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