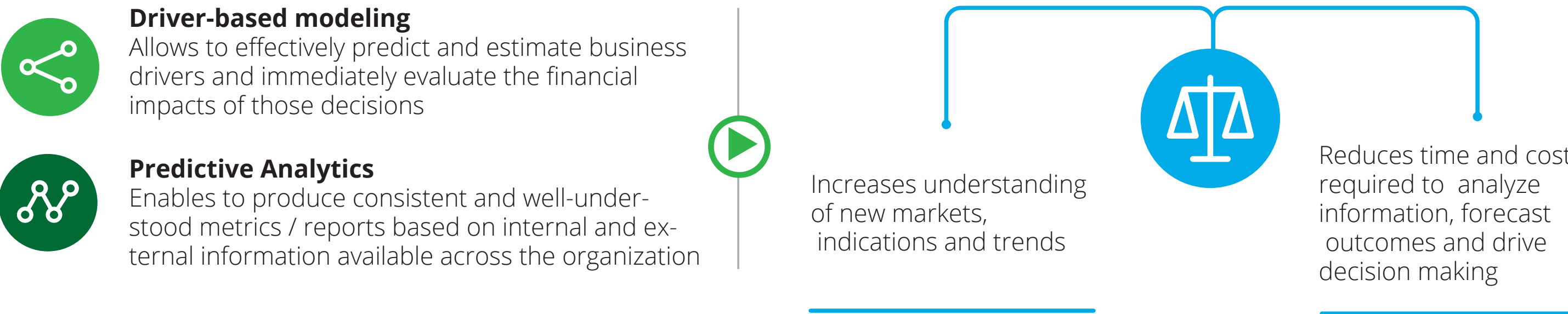# Deloitte.

Sales forecasting within Life Sciences
A Deloitte point of view

Sales forecasting in the pharmaceutical industry is not always accurate, pre- and post- product launch. Deloitte sees 3 main pillars to drive and increase forecasting process maturity
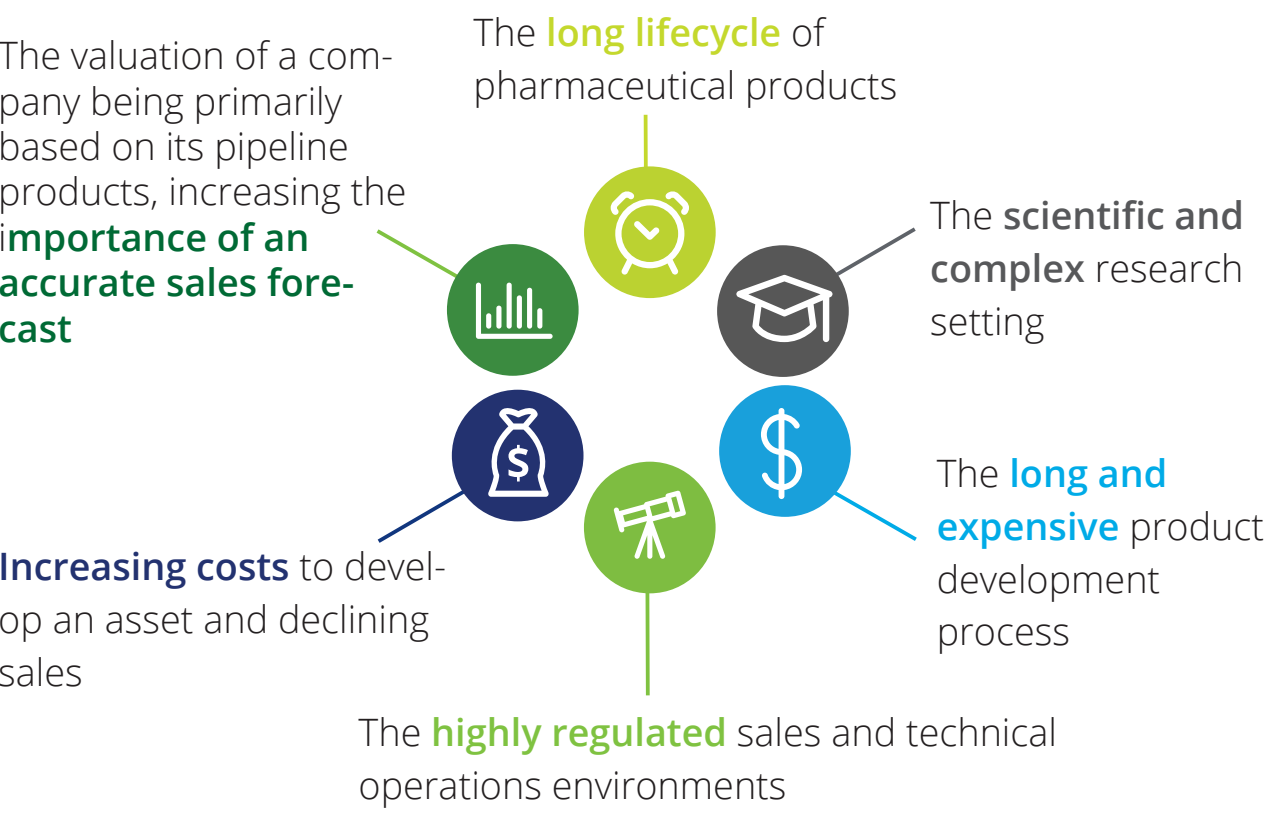
1 Driver-Based Modeling & Predictive Analytics

2 Aligning Strategy, Finance & Operations

3 In-Memory Computing, Multi-dimensional OLAP & Cloud Solutions

What is driver-based modeling & predictive analytics?

Driver-based modeling
Allows to effectively predict and estimate business drivers and immediately evaluate the financial impacts of those decisions

Predictive Analytics
Enables to produce consistent and well-understood metrics / reports based on internal and external information available across the organization

Increases understanding of new markets, indications and trends

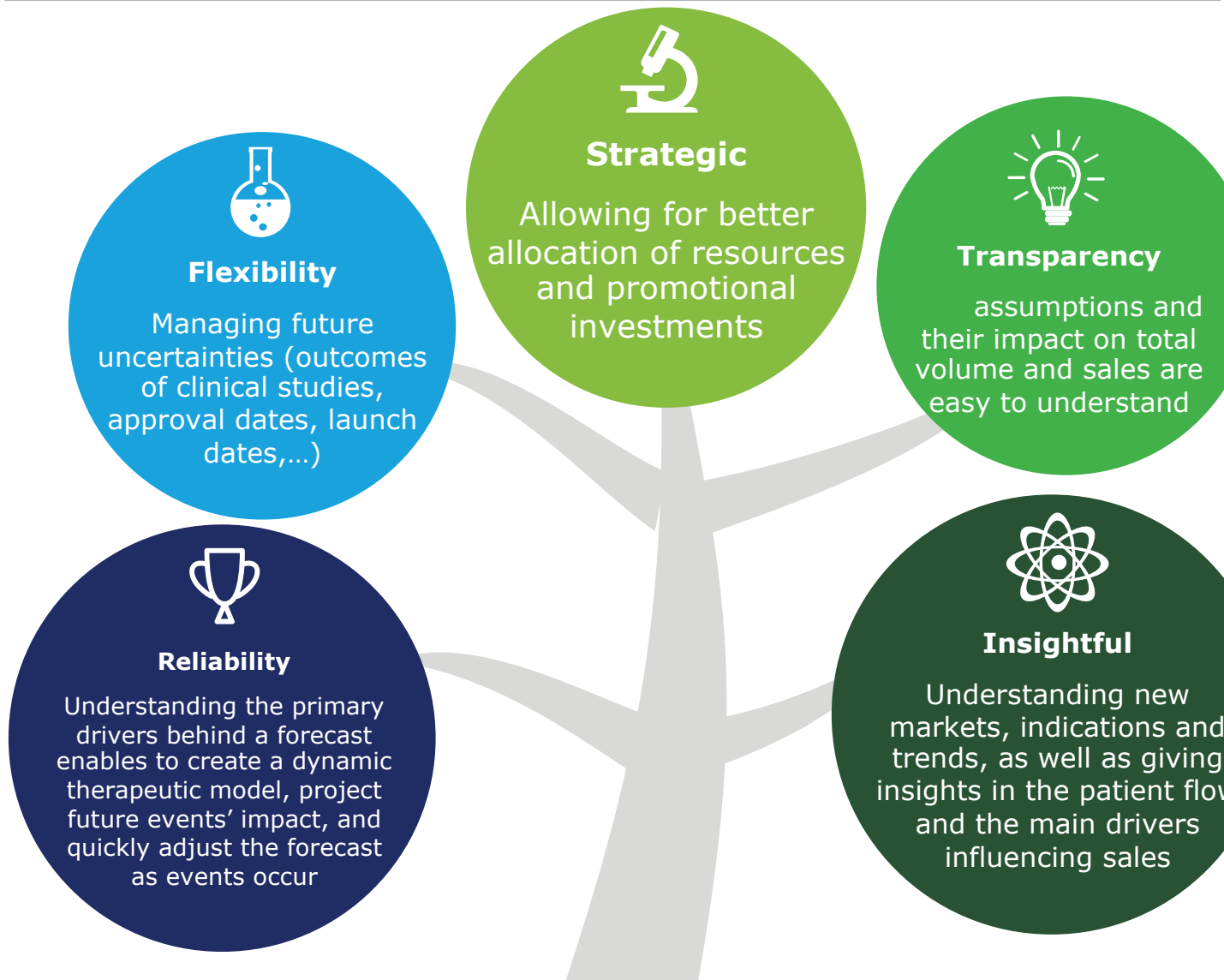Reduces time and cost required to analyze information, forecast outcomes and drive decision making

The specific nature of pharmaceuticals requires specialised methods:
patient-based forecasting

Pharmaceutical companies face many **different challenges** in comparison to other manufacturing companies:

The valuation of a company being primarily based on its pipeline products, increasing the **importance of an accurate sales forecast**

The **long lifecycle** of pharmaceutical products

The **scientific and complex** research setting

Increasing costs to develop an asset and declining sales

The **long and expensive** product development process

The **highly regulated** sales and technical operations environments

Specialized methods are required for the methodological framework and forecasting analytics used to support product sales projections and long term planning

Patients-Based Forecasting is a reliable approach that allows for a better understanding of the primary drivers behind the sales

Flexibility
Managing future uncertainties (outcomes of clinical studies, approval dates, launch dates,...)

Strategic
Allowing for better allocation of resources and promotional investments

Transparency
assumptions and their impact on total volume and sales are easy to understand

Reliability
Understanding the primary drivers behind a forecast enables to create a dynamic therapeutic model, project future events' impact, and quickly adjust the forecast as events occur

Insightful
Understanding new markets, indications and trends, as well as giving insights in the patient flow and the main drivers influencing sales

The four steps of patient-based sales forecasting

1. Epidemiology & Segmentation

Estimation of total market and population by indication and split of total number of patients into segments and subsegments

3. Volume Derivation

Conversion of number of patients into a unified measure of unit with regards to the volume sold

2. Patient Shares & Penetration Rate

Forecast of market share by brand per (sub)segment, relative to competition in each segment

4. Sales

Conversion from volumes into sales by applying a certain price taking into account certain industry specific items e.g. Parallel trade, rebates,...

Contact us directly to discuss how to leverage Patient-based sales forecasting for your organisation

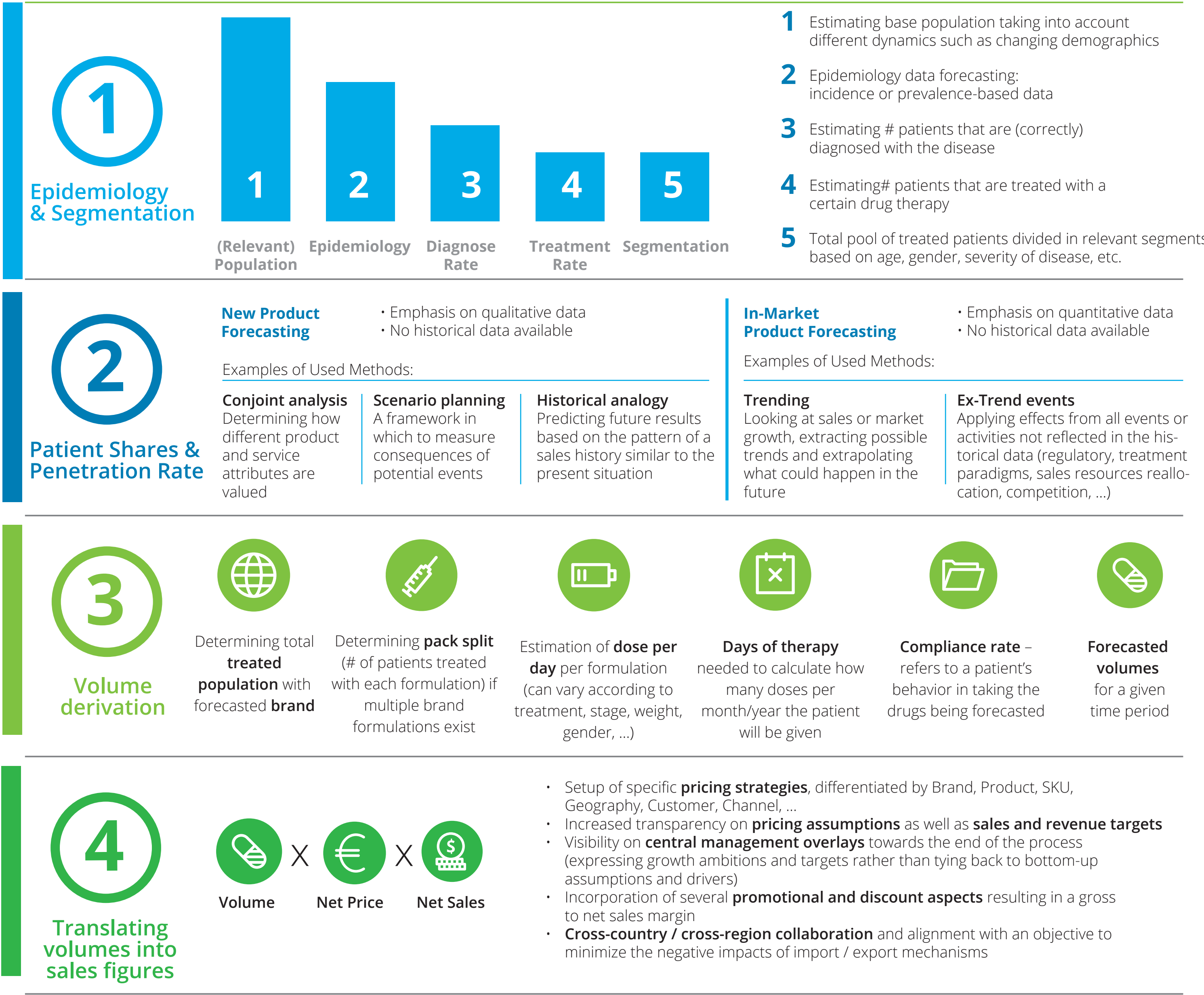**Nicolas Van Houtryve**
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For a more detailed description of the above steps, please see next page

Sales forecasting within life sciences & healthcare
A Deloitte point of view

The four steps of patient-based sales forecasting

1 — Epidemiology & Segmentation

1 (Relevant) Population
2 Epidemiology
3 Diagnose Rate
4 Treatment Rate
5 Segmentation

1 Estimating base population taking into account different dynamics such as changing demographics

2 Epidemiology data forecasting: incidence or prevalence-based data

3 Estimating # patients that are (correctly) diagnosed with the disease

4 Estimating # patients that are treated with a certain drug therapy

5 Total pool of treated patients divided in relevant segments based on age, gender, severity of disease, etc.

2 — Patient Shares & Penetration Rate

New Product Forecasting
• Emphasis on qualitative data
• No historical data available

Examples of Used Methods:

Conjoint analysis Determining how different product and service attributes are valued

Scenario planning A framework in which to measure consequences of potential events

Historical analogy Predicting future results based on the pattern of a sales history similar to the present situation

In-Market Product Forecasting
• Emphasis on quantitative data
• No historical data available

Examples of Used Methods:

Trending Looking at sales or market growth, extracting possible trends and extrapolating what could happen in the future

Ex-Trend events Applying effects from all events or activities not reflected in the historical data (regulatory, treatment paradigms, sales resources reallocation, competition, …)

3 — Volume derivation

Determining total treated population with forecasted **brand**

Determining pack split (# of patients treated with each formulation) if multiple brand formulations exist

Estimation of **dose per day** per formulation (can vary according to treatment, stage, weight, gender, …)

Days of therapy needed to calculate how many doses per month/year the patient will be given

Compliance rate – refers to a patient's behavior in taking the drugs being forecasted

Forecasted volumes for a given time period

4 — Translating volumes into sales figures

Volume × Net Price × Net Sales

• Setup of specific **pricing strategies**, differentiated by Brand, Product, SKU, Geography, Customer, Channel, …
• Increased transparency on **pricing assumptions** as well as **sales and revenue targets**
• Visibility on **central management overlays** towards the end of the process (expressing growth ambitions and targets rather than tying back to bottom-up assumptions and drivers)
• Incorporation of several **promotional and discount aspects** resulting in a gross to net sales margin
• **Cross-country / cross-region collaboration** and alignment with an objective to minimize the negative impacts of import / export mechanisms

How to unlock the full potential of patient-based sales forecasting?

Embed organisationally via integrated business planning

Sales forecasting should not be an isolated process:

Aligning **Finance** and **(Sales & Operations** leverages on **both strengths to decide** upon the course of action:

Forecasting process should be part of an **integrated planning cycle**

calculating the true bottom line impact of different scenarios

using an accurate supply chain model to decide upon the course of action

Establishing and ensuring an environment for successful execution of the **strategic directions of the organisation**

…underpinned by technology

Technology breakthroughs and commoditization of computing power are enabling companies to achieve **a new level of value creation through (integrated) planning**

Planning can happen on any level with aggregation to the highest level and drill-down to the lowest…

While still remaining consistent at its lowest level assumptions

Ability to integrate new business planning domains that previously happened in different tools and level of detail

Simulations and what-if analyses that before required overnight runs can be executed on the fly

Many cloud based providers and solutions offer the right set of capabilities to allow increasingly large and complex, driver-based forecasting models

The Integrated Business Planning Framework

IBP

1 Sales / Demand Consensus
2 Supply Consensus
3 Operations Consensus
4 Finance Consensus

Portfolio Strategy and Planning
Demand and Commercial Planning
Inventory Planning
Supply Planning
Production and Distribution Planning
Operational Execution
Operational Reporting and Analysis
Financial Planning and Analysis

Capabilities

In-memory data engine
Built-in intelligence
Spread-sheet-like immediacy
Blueprints & apps
Cloud delivery