



DDD - die integrierte Lösung für Patienten

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Pharmaceutical industry under pressure

External factors

- Patient needs
- Payer driven market
- Regulation

- „Saturated“ market
- Reputation/Image
- Shareholder pressure



Internal factors

- Science
- Productivity
- Strategic decisions
- Reputation/Image

... and what are the (potential) solutions?

- Cost flexibility by increasing variable costs and decreasing fix costs
- Open innovation and external co-operations
- Integrated organisational solutions
- Integrated solutions for patients
- Early regulatory contacts
- Translational medicine
- Operational excellence and regionalisation
- Personalized medicine
- CDDO's

Integrated solutions for patients (1)

The principle

Figure 2. Examples of convergence

Device – Drug

- Drug-eluting stent that opens and prevents restenosis in coronary and peripheral arteries
- Bone grafting scaffold/sponge coated with a growth protein that promotes bone regeneration
- Implantable, programmable pump that delivers a drug or biologic in small, timely doses
- Implantable polymer wafer that releases a chemotherapy agent to a specific site
- Implantable neuromodulator that enables the targeted, regulated delivery of a drug or electrical stimulation
- Transdermal patch that transports drugs locally and systematically through the skin
- Pre-filled, metered dose syringe, injector pen, or inhaler

Diagnostic – Drug

- Screening test for the presence of a specific gene or protein coupled with targeted drug therapy
- Use of passive pharmaceuticals and radiopharmaceutical tracers as contrast agents for positron emission tomography (PET) scanners

Diagnostic – Device – Drug

- Glucose monitor with an insulin pump

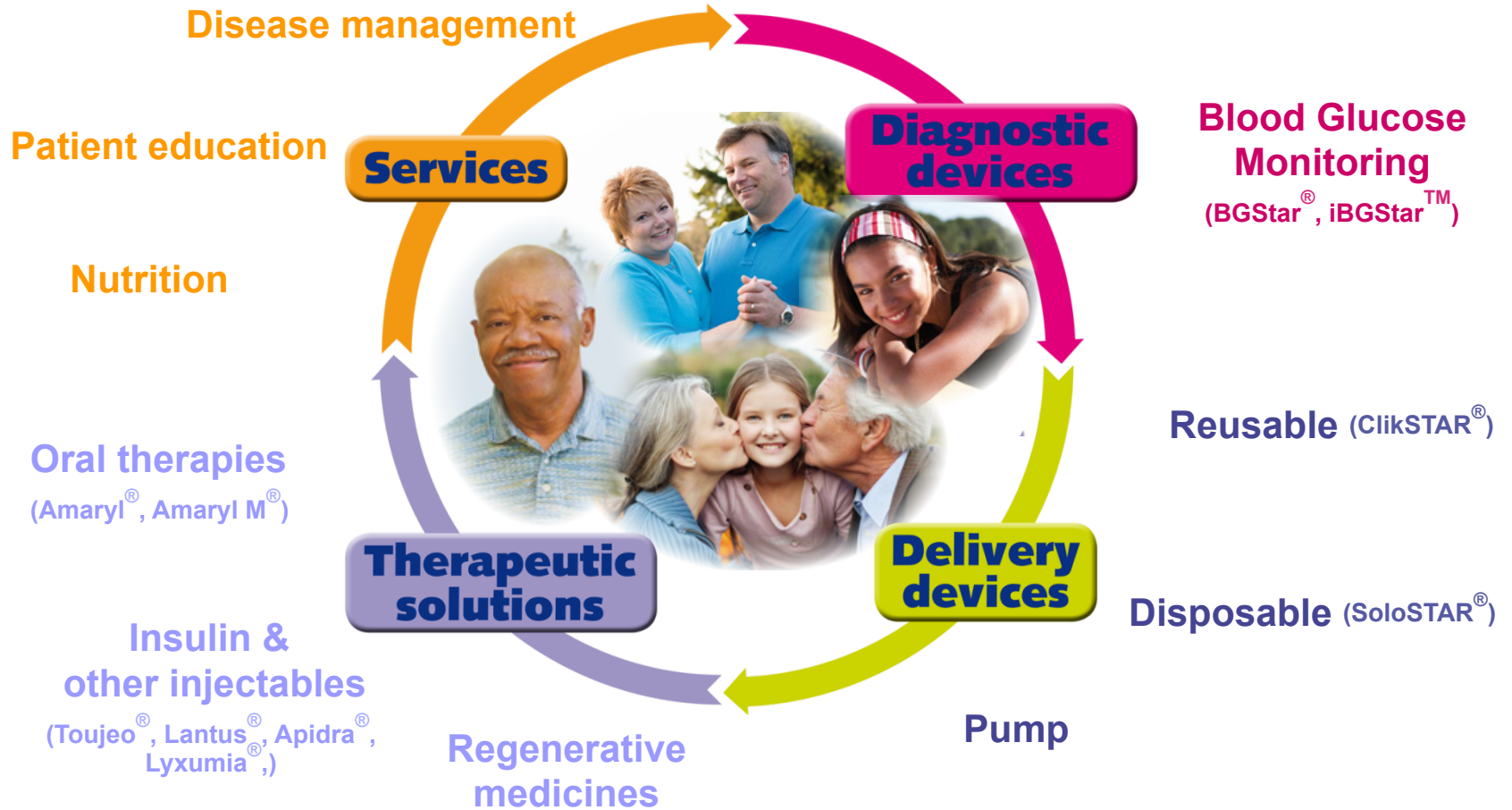
Source: Deloitte Research

Das 3D Paradigm (Drug/Device/Diagnostics)



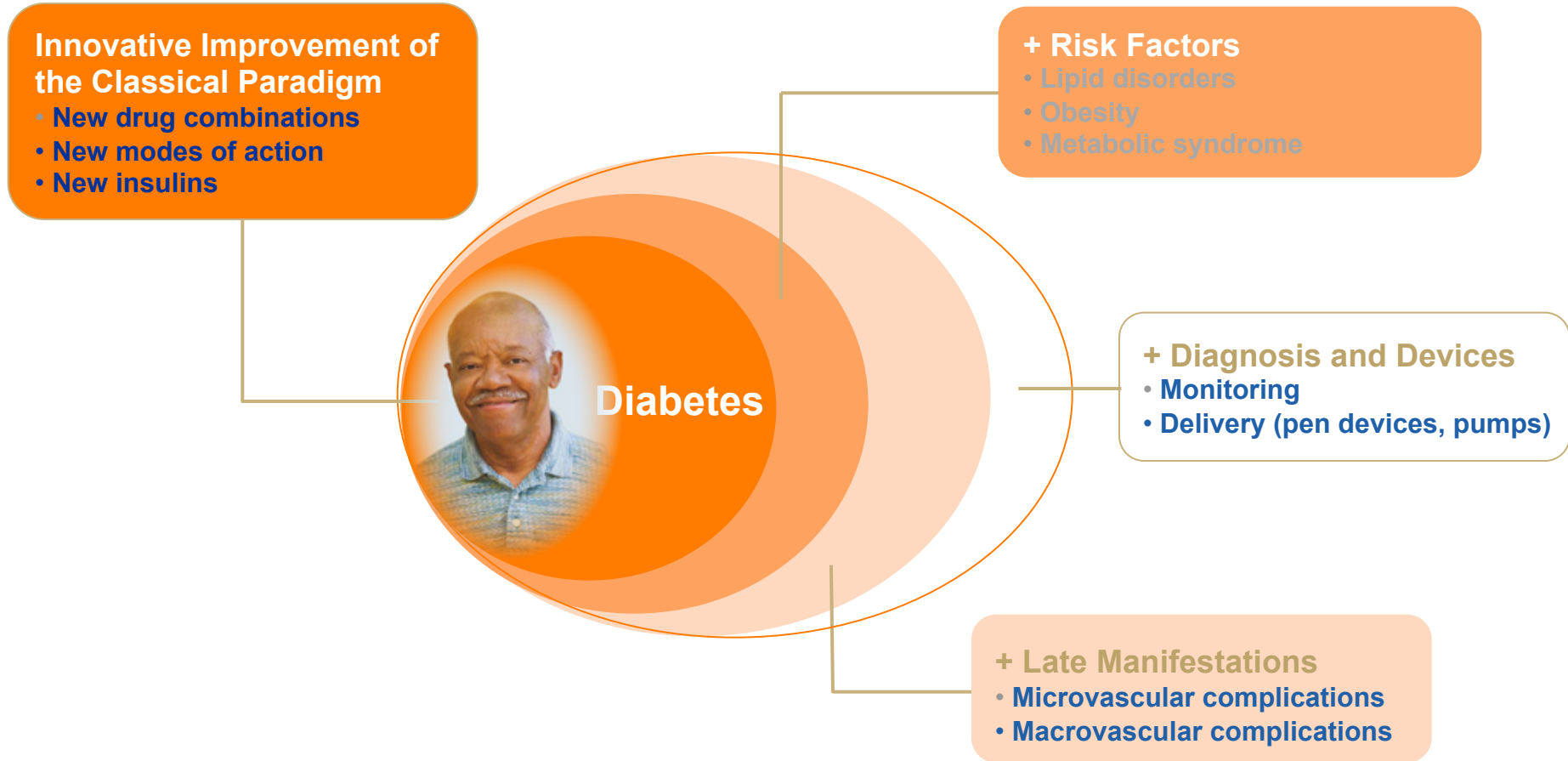
Integrated solutions for patients (2)

The Diabetes example



Integrated solutions for patients (3)

The Diabetes example – *translated into R&D*



⇒ Pre-Diabetes and Diabetes are the “entry” into multiple diseases