

MARKET STUDY T2D DATA AND DATABASES

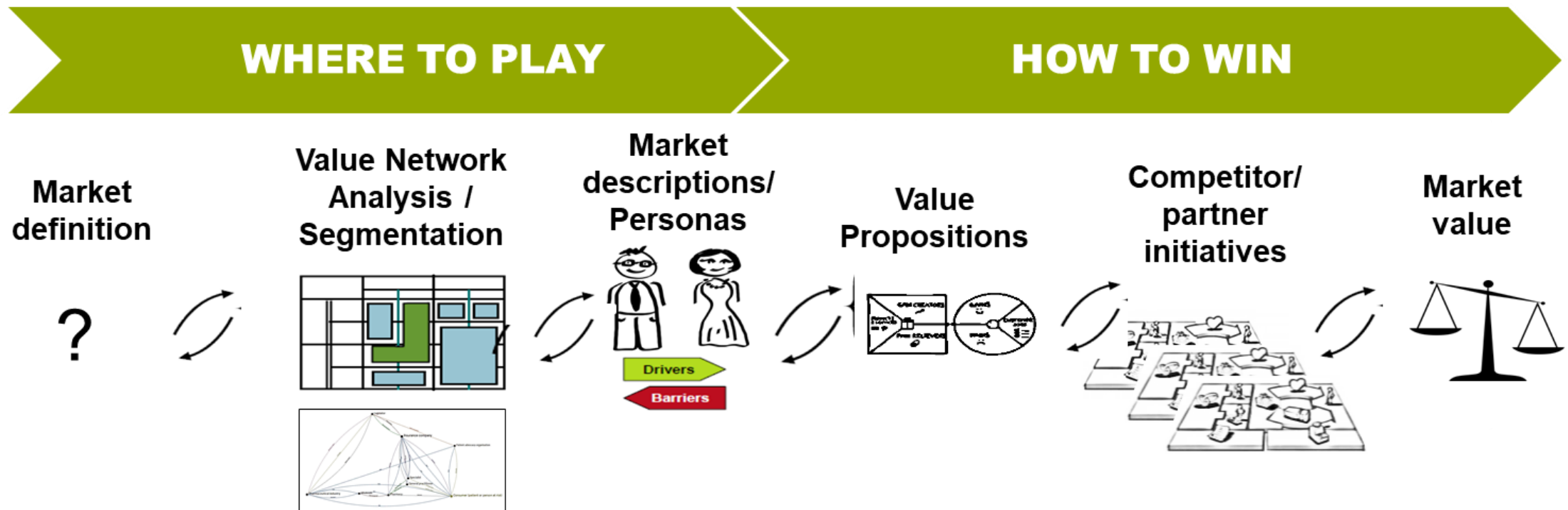
› **EASME**

IR. M. VAN DORT

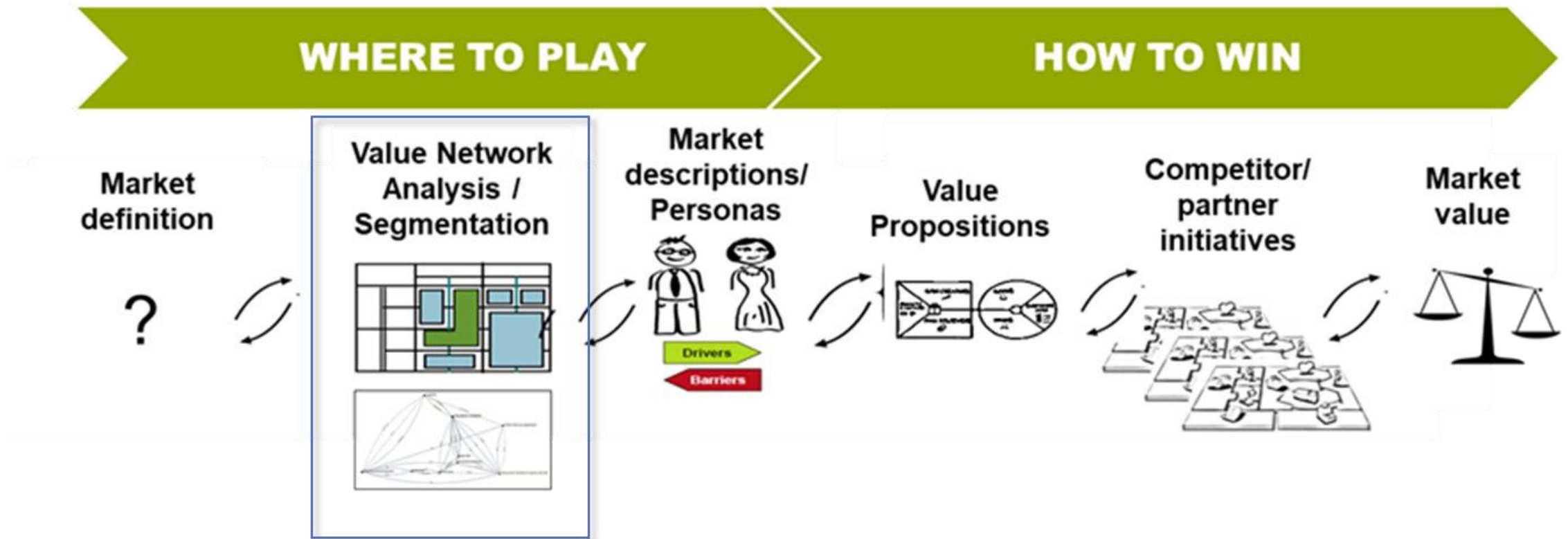


› **APPROACH**

STEP BY STEP METHODOLOGICAL APPROACH FOR THE MARKET ANALYSIS



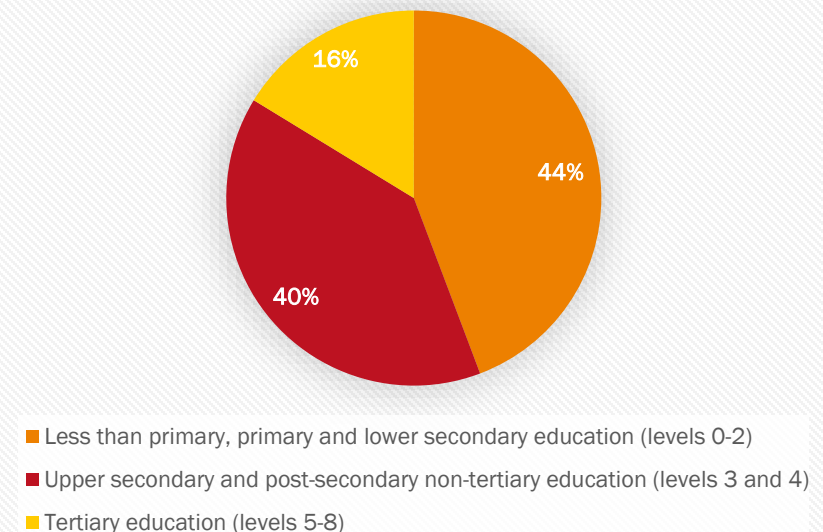
› VALUE NETWORK ANALYSIS



› BOTH MEDICAL AND HEALTH VALUE CHAIN ARE DRIVEN BY LACK OF SPENDING POWER OF T2D CONSUMER

- › Ca. 32.724.000 people, representing 8.1% of the total population aged 20-79 2017 EU28
- › Average income of around EUR 16,833 of T2D citizens EU28 2014 below median, T2D consumer does not have a lot of spending power
 - › fewer choices regarding food, sports (e.g. availability of healthy foods, availability of places to exercise)
 - › health behaviours (e.g. diet, physical activity)
 - › in some countries healthcare and processes of diabetes care (e.g. measurement of HbA1c, smoking cessation)
- › Low socio-economic position and education level reduce the negotiation power of this patient group towards governments

Level of education of Diabetes T2 Citizens EU28 15+ years (2014)

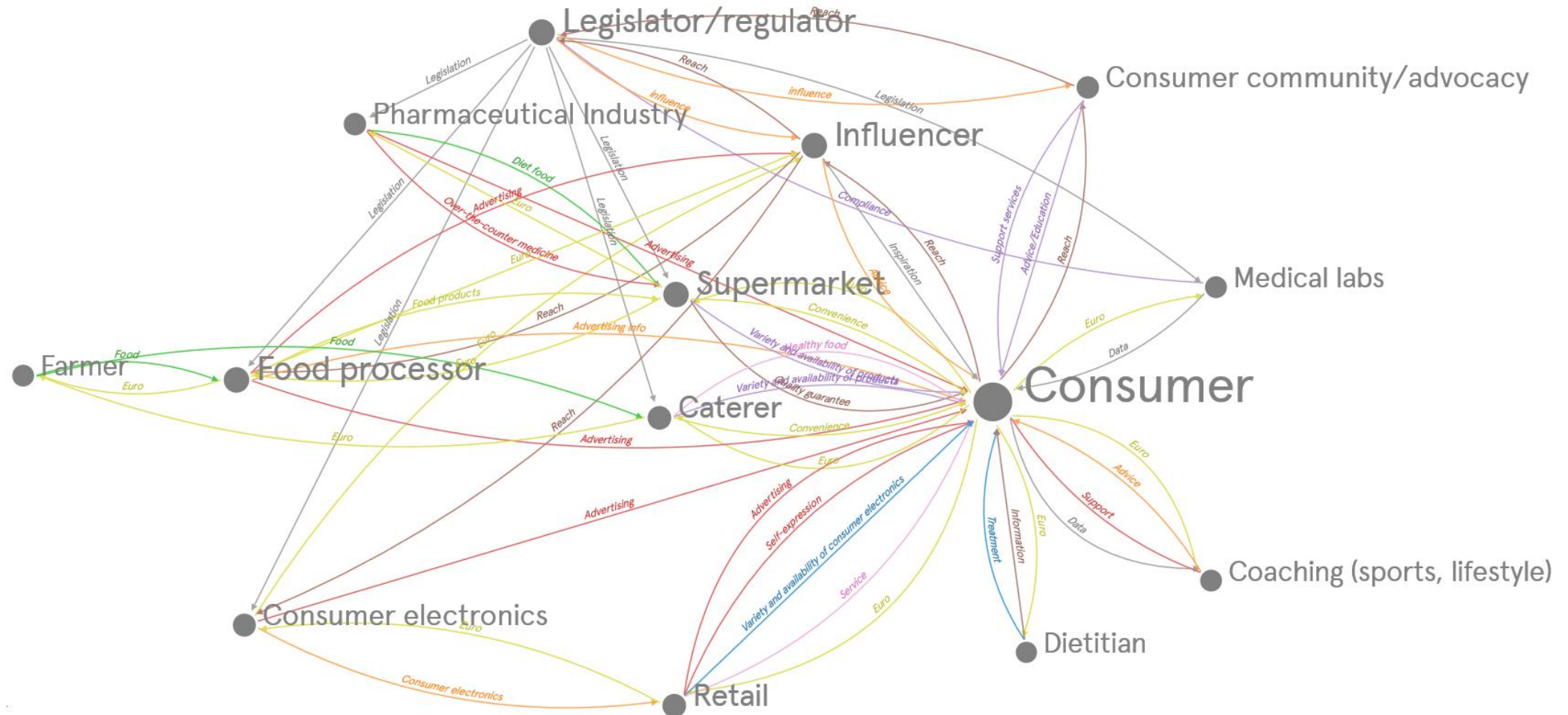


› MAIN TARGET MARKETS FOR T2D DATA SOLUTIONS ARE THE HEALTH INSURANCES AND PHARMACEUTICAL INDUSTRY

- › Most of the monetary value flows to the pharmaceutical industry, average high EBITDA margin of 27% in 2015 *)
 - › Pharmaceutical industry has the role of Product Innovator in the value network
- › Insurance companies carry out the national governmental policies regarding health
 - › Governing role makes them capable of organising innovations around data
- › Other stakeholders in the value network, e.g. general practitioners, specialists, and pharmacies are predominantly SMEs
 - › Limited financial and time resources for innovation
- › T2D advocacy organisations appear underfunded
 - › Risk regarding protection of data and lack of lobbying for game changing innovations such as health apps




*) Source <https://sp-unternehmerforum.de/european-working-capital-study-in-pharmaceuticals-industry/>

LOW INTEREST IN T2D FROM SUPERMARKETS, FOOD PROCESSORS AND CATERERS CAUSED BY 'ILLNESS IMAGE' AND LOW SPENDING POWER OF CONSUMERS

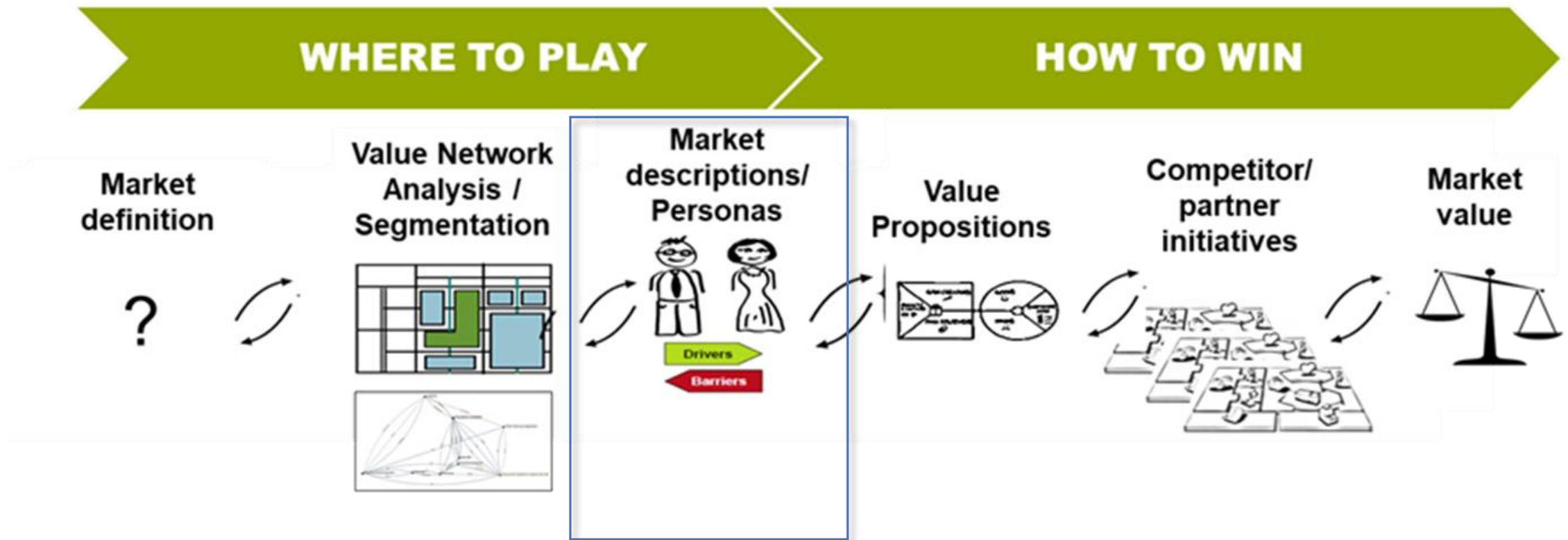


Source TNO based on interviews and literature research.

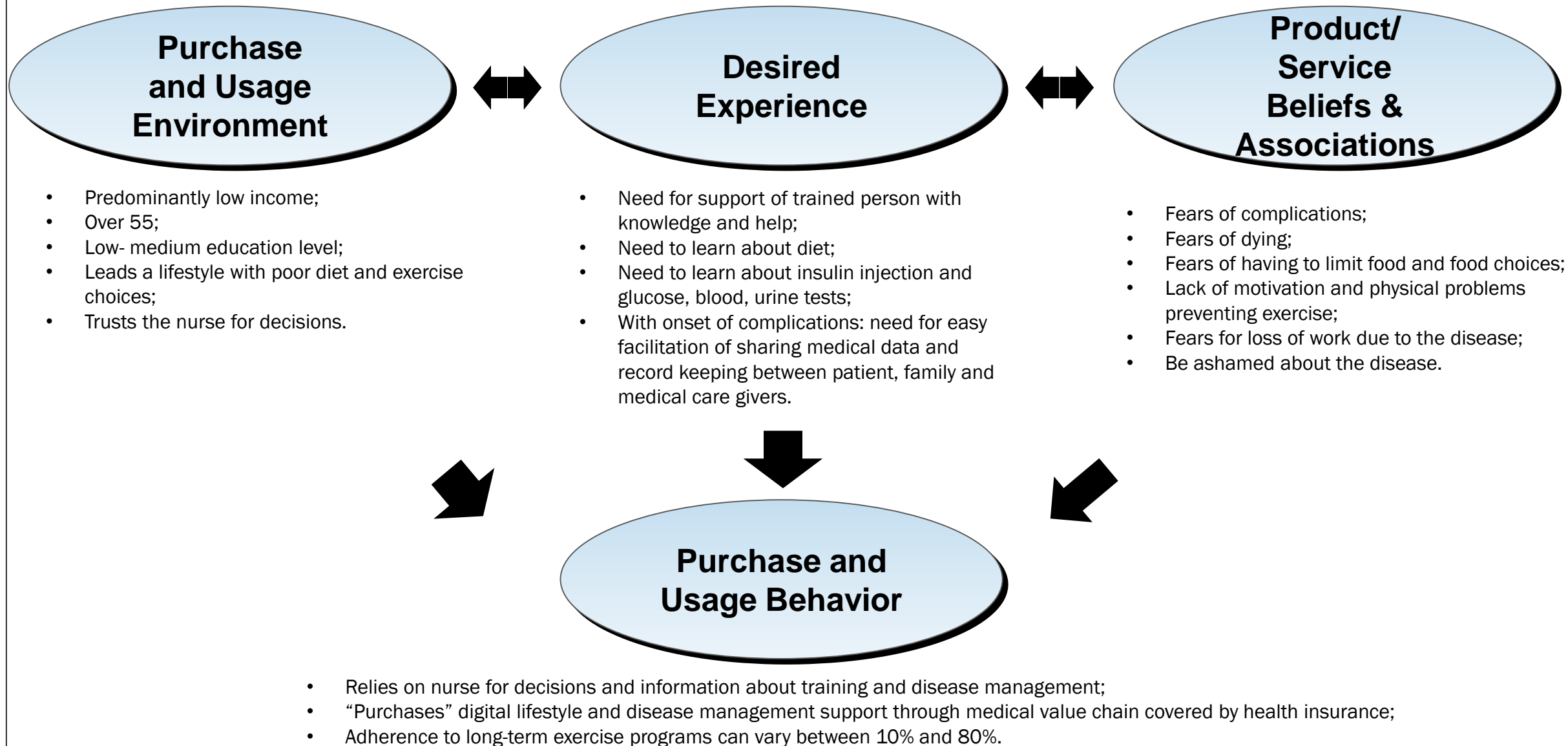
› INTERESTS OF MAIN MARKET SEGMENTS

Stakeholder		Interests / needs
	Consumer (patient/person at risk)	<ul style="list-style-type: none">• Improve health and quality of life.• Evaluate better treatment options.• Understand risks and benefits.
	Pharmaceutical industry	<ul style="list-style-type: none">• Advanced R&D and pipeline management.• Patent management and strategies.• Determine safety profiles for admission tests.• Assess efficacy and effectiveness.
	Health insurance company	<ul style="list-style-type: none">• Ensure cost-effectiveness with price arrangements and operational excellence.• Accurate assessment of risks.• Provide evidence-based care.• Good financial investment mix.

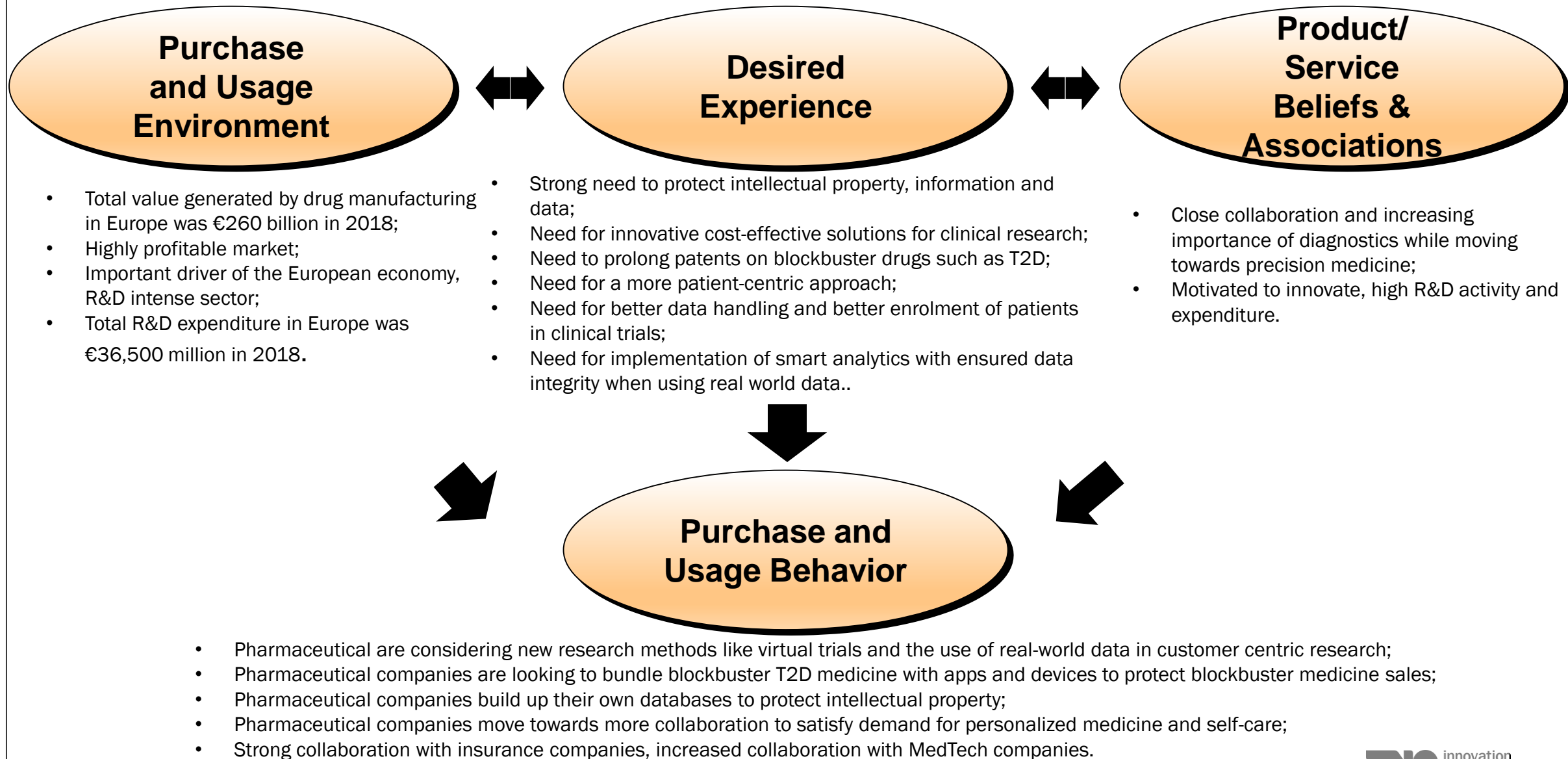
MARKET PROFILES



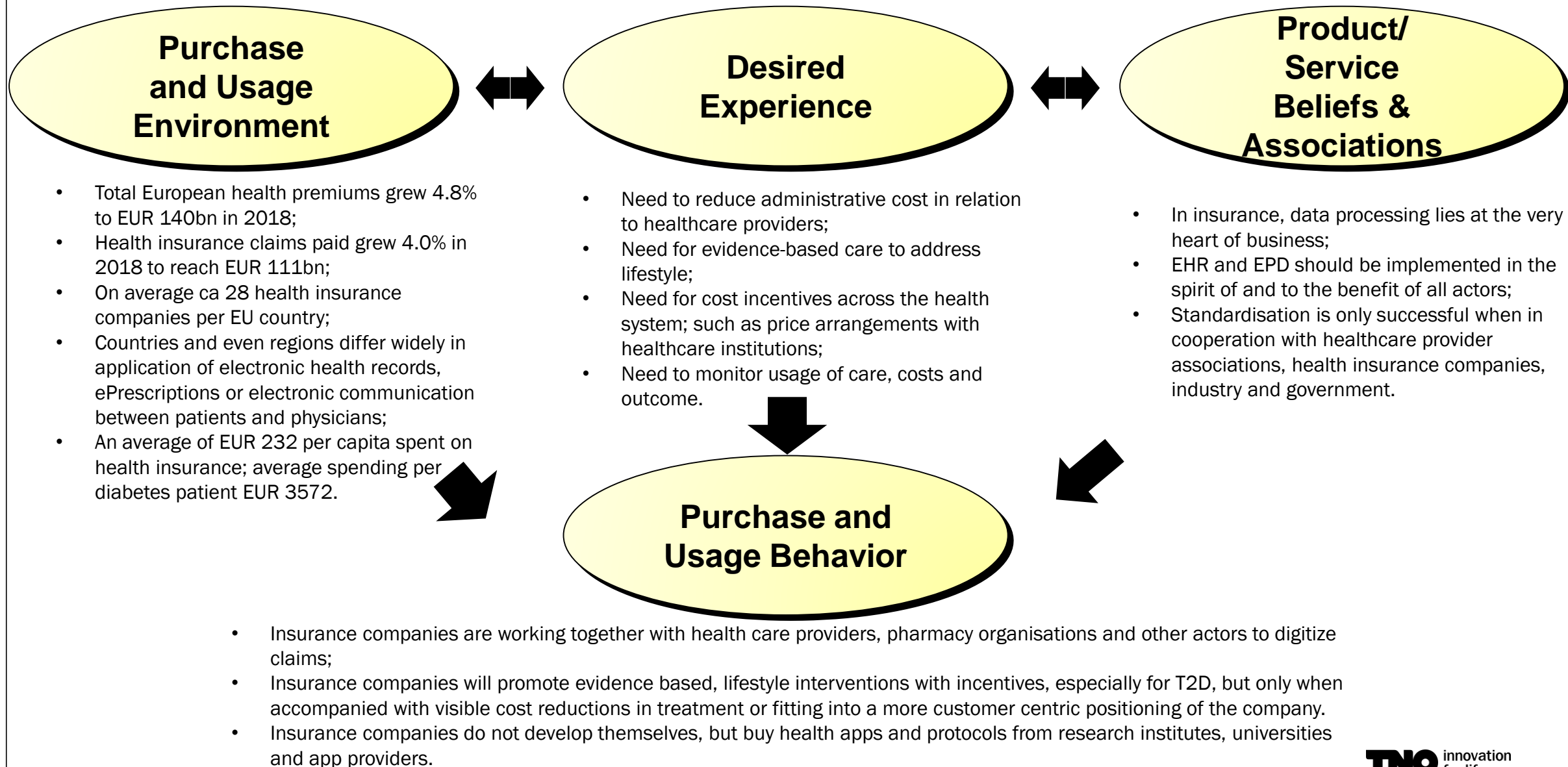
T2D CONSUMER PROFILE



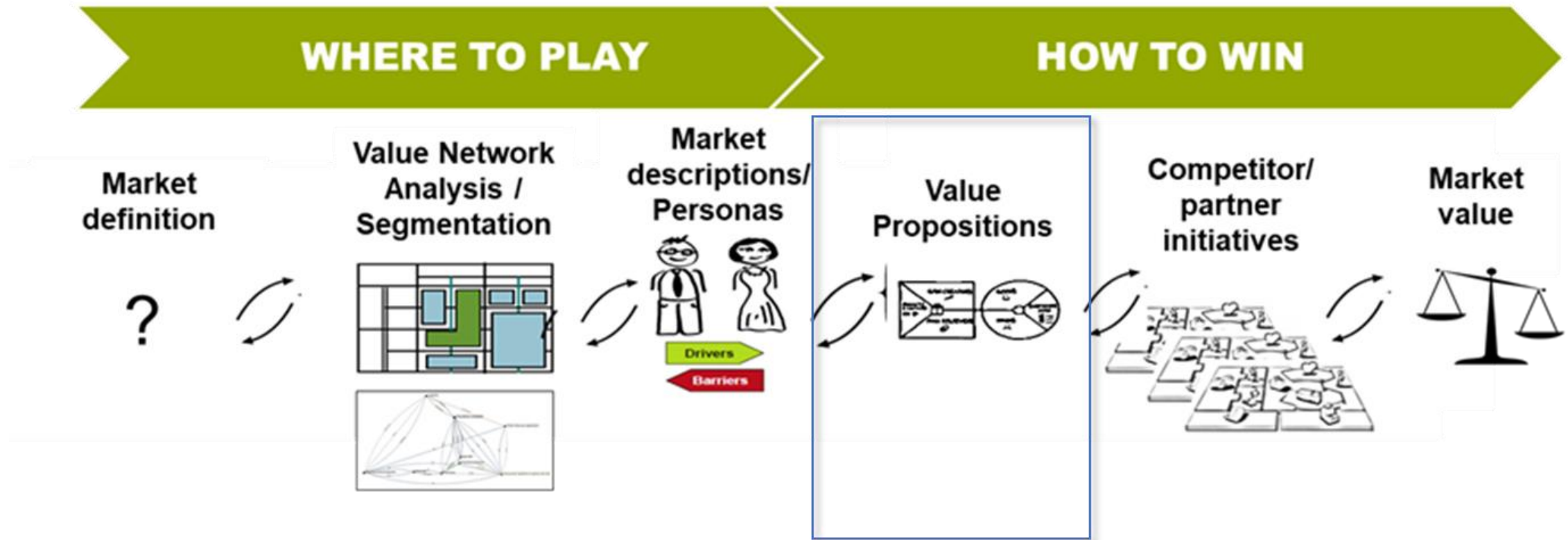
PHARMACEUTICAL INDUSTRY PROFILE



HEALTH INSURANCE MARKET PROFILE



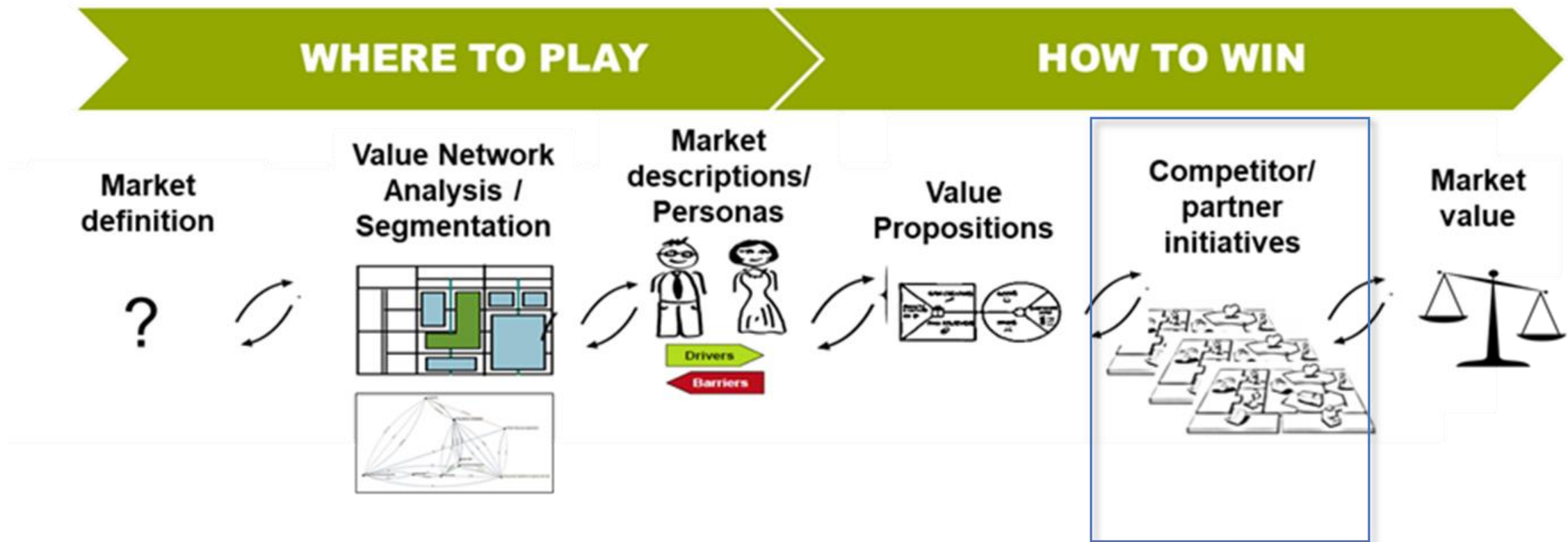
› VALUE PROPOSITIONS



› NEEDS FOR DATA AND DATABASES IS HIGHEST IN RESEARCH AND DIAGNOSTICS, HEALTH APPS

Application	Target market	Data source needed? (purchased data in bold)	Sharing of data needed with a platform?
Research	Pharmaceutical industry.	Clinical setting data, patient powered data , medical claims data, clinical trials data, pharmacy data.	Yes, the more quality data combined the better, through (existing) 3 rd party data provider.
Diagnostics	Consumer.	Clinical research data, Patient powered data .	No, built on clinical research data and then operates on patient generated data.
Health apps	Consumer, health insurance company, pharmaceutical industry.	Clinical research data, Patient powered data .	No, built on clinical research data and then operates on patient generated data.
EHR	Insurance company, consumer.	Medical claims data from different stakeholders.	Yes, trusted 3 rd party to ensure collaboration between different stakeholders.
Claims automation	Insurance company.	Medical claims data from different stakeholders.	Yes, trusted 3 rd party to ensure collaboration between different stakeholders.

COMPETITOR ANALYSIS

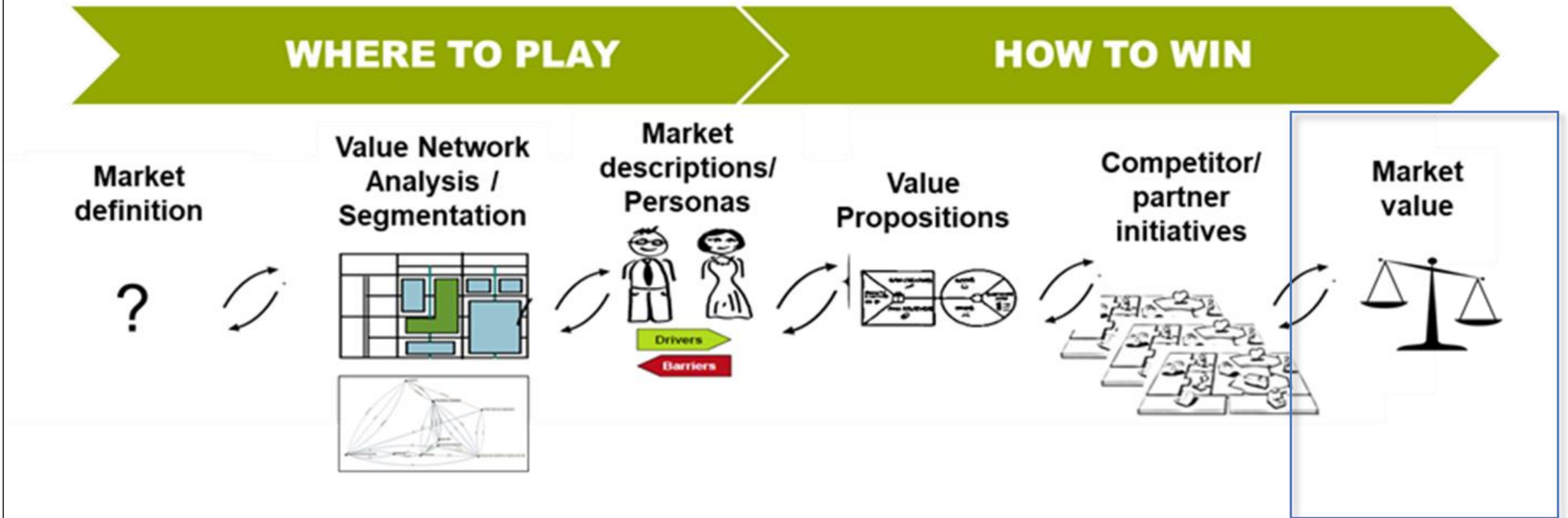


› MARKET IS NOT CROWDED

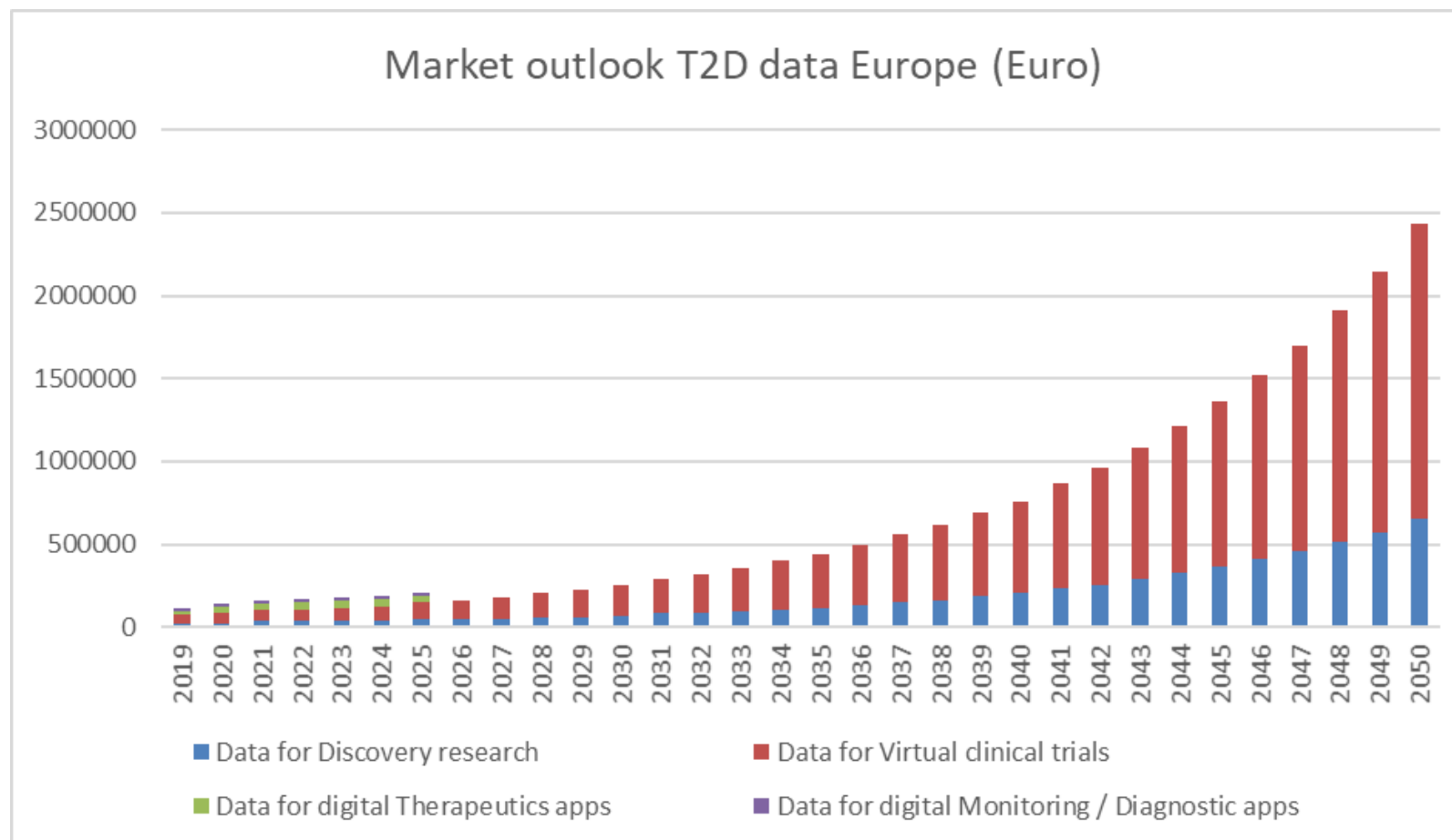
- › Only a small number of companies offer health data that includes T2D data.
 - › Only IQVia and Medidata have extensive commercial offerings for research.
 - › Andaman7 might become an interesting data intermediary but is still in the start-up phase.
 - › Medisafe has good offerings, but only for the niche of medication adherence.
 - › Healthy diet for a healthy life may develop into a data provider, and IDSA and Findata might develop into data intermediaries.
- › New business initiatives with a good business model and good execution of their critical success factors should be in a good starting position to succeed



MARKET OUTLOOK



› THE TOTAL MARKET FOR T2D DATA RANGES FROM CA. EUR 144 THOUSAND EUROS IN 2020 TO EUR 2.5 MILLION IN 2050



Source: Estimations by TNO, based on Roots Analysis , ASPE, US Department of Health & Human Services , Tufts Center for the Study of Drug Development, and Office of Health Economics

› CONCLUSIONS AND RECOMMENDATIONS (1/2)

T2D DATA SMALL NICHE MARKET

- Small niche market, which is only a sizeable opportunity when combined with data from other illnesses and/or with other services such as data analytics or data collection services

NEED FOR REIMBURSEMENT MODELS FOR HEALTH APPS

- › Need to encourage the use of health apps bundled with policies to include these health apps under basic health insurance
 - › Lack of coverage through insurance limits start up activity in Europe
 - › Reimbursement models for health apps for T2D need to be developed
 - › Fact based research reports proving benefits apps (promise to replace 70% of T2D medicine) are scarce
 - › Need for support of research into the benefits and reduction of medication



› CONCLUSIONS AND RECOMMENDATIONS (2/2)

NEED FOR COMMON SCIENTIFIC DATA STANDARD FOR HEALTH DATA

- Another hurdle preventing the uptake of the use of real world data is that it is hard to compare data across databases
 - › Need for a common scientific standard, for pre- and post- data release through Horizon Europe research

NEED FOR SUPPORT OF RESEARCH OF PATIENT ADVOCACY ORGANISATIONS

- › Patient advocacy organisations for T2D patients are not sufficiently patient funded
 - › Oversee data protection of patient powered data in health apps and diagnostics for T2D
 - › Support research into the benefits T2D apps



› **THANK YOU FOR YOUR ATTENTION**