mHealth in Trials

PhUSE

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A new continuum of drug development

Five areas of innovation where development and commercial are integrated into a single continuous environment

Candidate Recruitment

- EHR–based targeting
- Genomic profiling
- Consumer genetic services
- Social media listening and NLP
- Electronic Consent
- Candidate Pre-Screening

Study Operation

- Personal medical devices and wearables for monitoring
- Smart devices for engagement and two way communications
- Analytics-driven engagement and adherence strategies
- Real-time study performance analytics

Regulatory Submission

- Cloud-based data management
- Powerful new analytics & insights
- Electronic submission

Post Trial Engagement

- Continued interaction, engagement and insights
- Participant access to personal and trial data
- Advanced understanding of QOL and side effects over longer periods of time

Patient Services

- Leverage education, interaction and adherence models for commercial services
- Augment and replace Phase IV trials with RWD leveraging larger more diverse populations
- Improved pharmacovigilance with increased patient engagement
- Richer data sets driving new study design and uncovering research opportunities

New Data is Driving New Opportunities

IoT is generating new types of data in real time

Clinical
Biometrics, Therapy

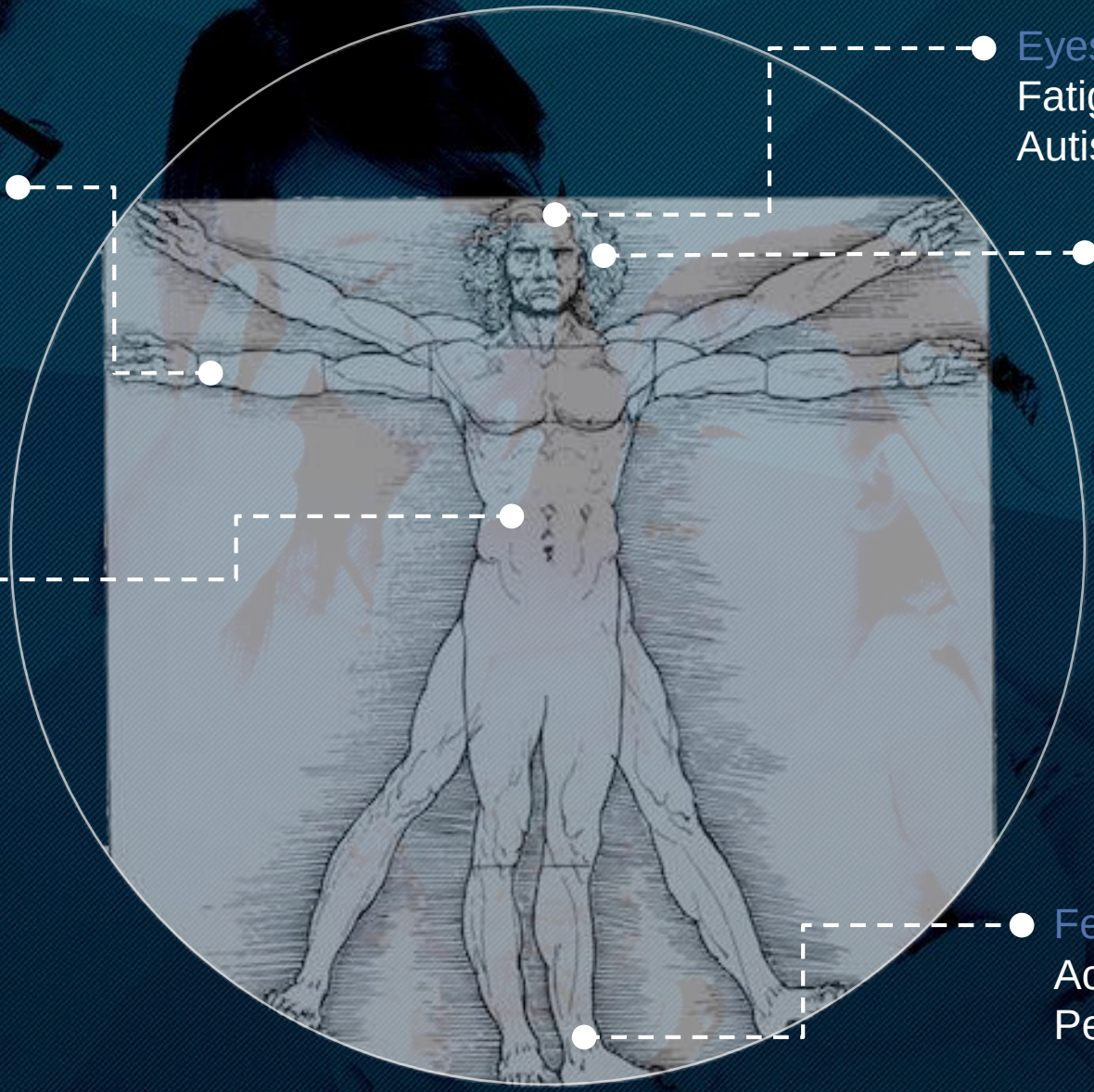
Survey
Qualitative

Personal
Activity, Behavior, Location

Ambient
Environment

- Insights
- Correlations
- Pre-indicators
- Accuracy
- Adherence

Measurable Medical Insights are Abundant



Eyes
Fatigue, Glucose, Stroke, Autism

Ears
Motion, Balance, Cadence, Gait, Heart Rate, Temperature, Respiration, BP, Blood Sugar

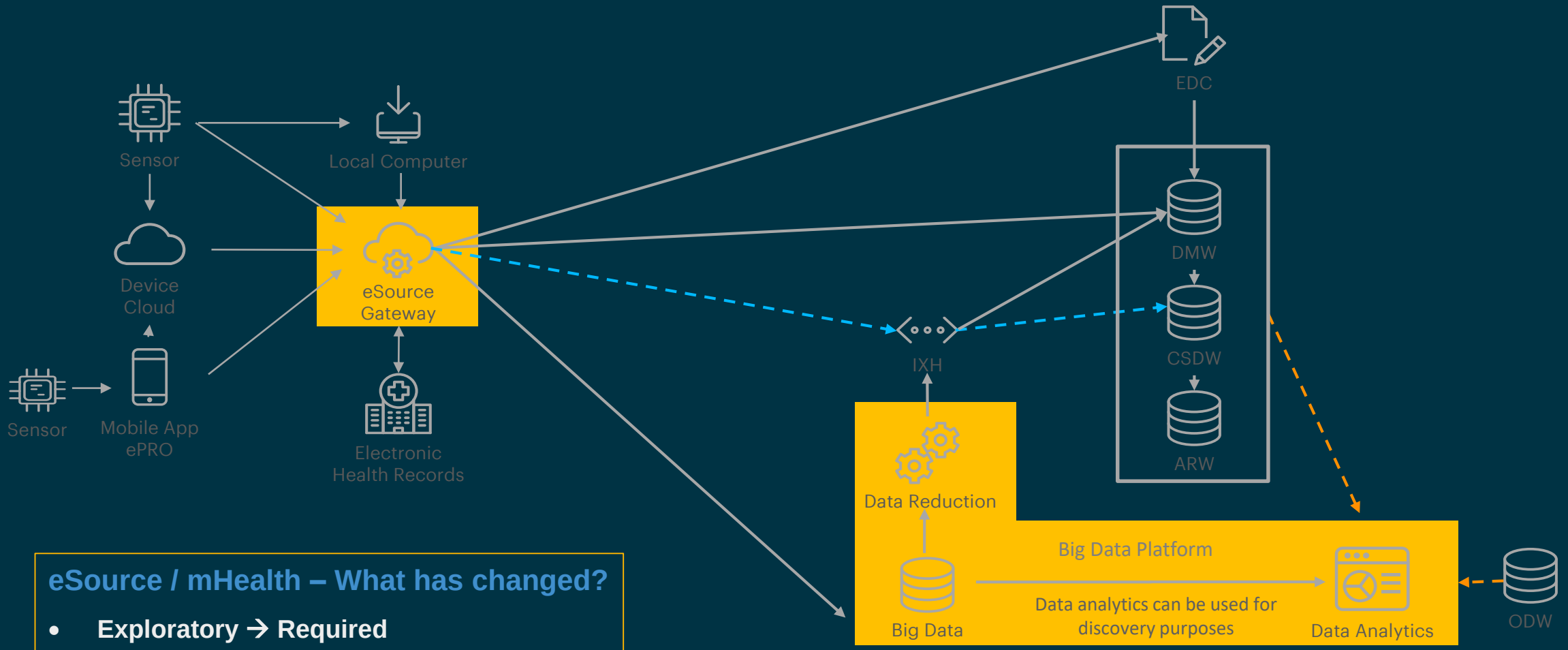
Wrist
Heart Rate, ECG, Skin Temperature, Activity, Stimulation

Internal
Glucose, HR, BP, GI Tract Monitoring, Medical Adherence, Activity

Feet
Activity, Motion, Pressure, Peripheral Neuropathy

High Level enterprise solution architecture

eSource is being deployed now – how is IT responding?



eSource / mHealth – What has changed?

- **Exploratory → Required**
- **Single eSource → Multiple Sources**
- **Siloed support → Enterprise Need**

Questions?