L7INFORMATICS

Precision Medicine Case Study

Setting-Up a Successful Bedside Genomics Program in a Health System

Rady Children's Institute
Genomic Medicine

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L7 Informatics Overview

L7 Informatics empowers precision science and health through digital solutions that accelerate discoveries and drive higher quality of healthcare. Our ESP end-to-end solution yields efficiencies that enable researchers to make more breakthroughs and healthcare systems to provide superior care.

- Founded: 2011 as lab7, rebranded in 2018 to L7 Informatics
- Headquarters: Austin, Texas
- Number of Employees: 35
- Product: Enterprise Science Platform
- Solutions: Scientific Research, Molecular DX, Regenerative Therapies,
- Industries: Life Sciences, Health Systems

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Our Mission

powering unforeseen synergies

Together, we can help improve quality of life.

Our mission is to revolutionize the scientific process, data management to accelerate precision health across life sciences, healthcare, and food value-chains.

Our end-to-end solutions and services yield efficiencies that enable researchers to make new genomics discoveries, precision therapeutics manufacturers to create higher fidelity therapies, health systems to provide superior diagnostics and precision care, and agrigenomics companies to meet tomorrow's food and nutrition needs through improvements to crops and livestock.

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L7 Informatics Sample Customer List by Vertical

Precision Diagnostics

AKOYA BIOSCIENCES

scipher MEDICINE

ARCHER

WRIGHTLABS

Precision Medicine

Rady Children's Hospital San Diego

CReATe Fertility Centre

Dana-Farber Cancer Institute

Precision Agriculture

INARI
A Flagship Pioneering Company

USDA

Agriculture and Agri-Food Canada

Precision Therapeutics

GRADALIS

G-CON MANUFACTURING

Precision Research

AstraZeneca

Mount Sinai

WASHINGTON UNIVERSITY IN ST. LOUIS 1853

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Case Study: Setting-Up a Successful Bedside Genomics Program in a Health System

Everyday discoveries in pediatric genomics are creating new possibilities to understand and treat rare genetic diseases. This work requires robust computational strength in order to process, analyze, and manage large data sets.

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powering unforeseen synergies

Together, we can help improve quality of life

Rady Children's Institute for Genomic Medicine (RCIGM) is embedded within Rady Children's Hospital-San Diego, the 6th largest children's hospital in the U.S. The Rady Clinical Genome Center incorporates both state-of-the-art infrastructure and expertise to provide rapid Whole Genome Sequencing (rWGS) to aid in the diagnosis of children with rare genetic disease.

Rady was seeking an integrated and automated scientific information management solution to streamline and optimize their rWGS from sample accessioning to clinical report generation and outcomes tracking.

L7 Informatics Inc. ("L7")'s Enterprise Science Platform (ESP) integrates multiple laboratory instruments, manages samples and inventory items, and automates many tasks, thus streamlining the overall laboratory, informatics, and clinical processes.

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Rady Children's Institute for Genomic Medicine (RCIGM)

5-year-old, non-profit research institute

Part of Rady Children's Hospital system

- 3rd largest children's hospital in the US
- ~50% Medicaid population
- History of collaborations with CA Dept. Health around healthcare innovations that improve outcomes and are cost-effective

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RCIGM: genomic medicine market leader committed to unlocking DNA sequencing for patients who need it the most

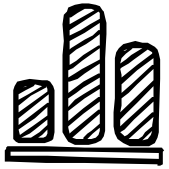
Rady Children's Institute Genomic Medicine

Purpose

RCIGM's purpose is to make rapid whole genome sequencing standard of care and expand access to genomically-informed Rapid Precision Medicine nationwide to children suffering from diseases of unknown origin.

Technology

RCIGM performs the world's fastest whole genome sequencing, making it a future cornerstone of pediatric critical care and genomic data

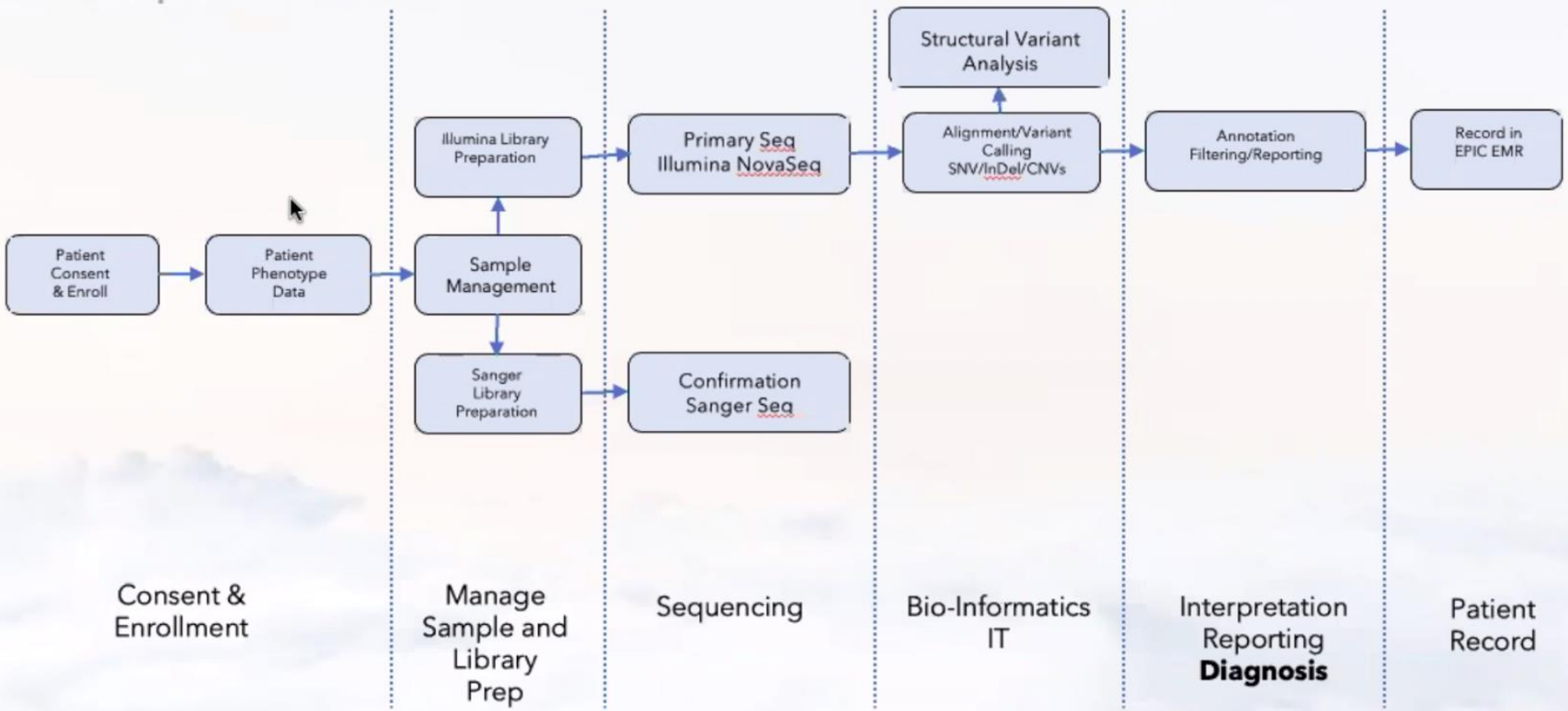


Accomplishments

- **Data Leader** Over 1,300 genomes sequenced to-date, anticipate 10,000 sequenced by 2023
- **Speed and Clinical Impact** World speed record for fastest genetic diagnosis – 19.5 hours
- **Partnerships** >40 partnerships in place with Children's Hospitals NICUs/PICUs
- **Clinical Outcomes** >30% diagnostic rate, including ultra-rare genetic findings

rare disease diagnostic process

Example workflow



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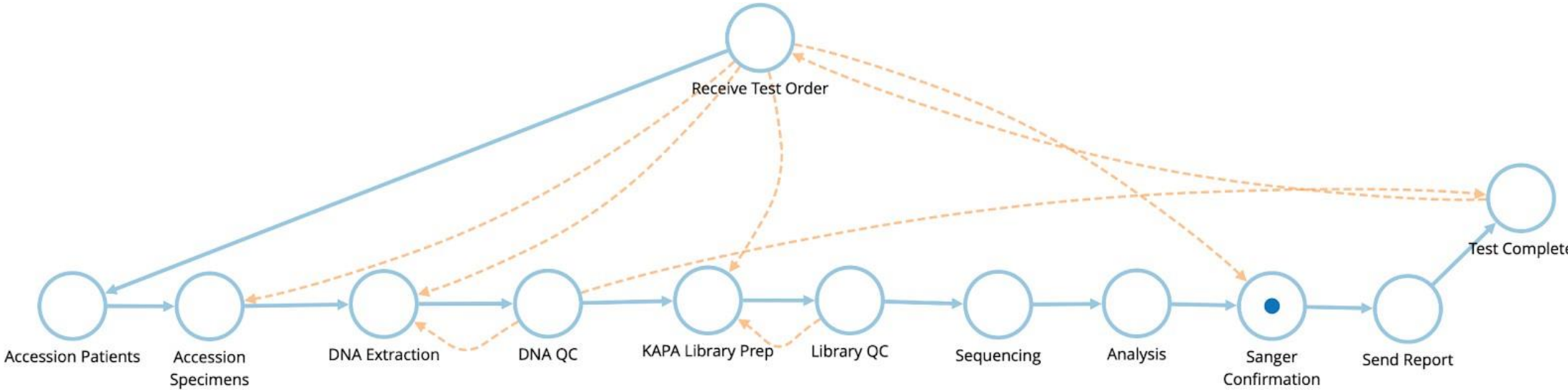
rare disease diagnostics case study: rWGS



L7's ESP workflow for whole genome sequencing testing & process for diagnosis of rare diseases in pediatric patients

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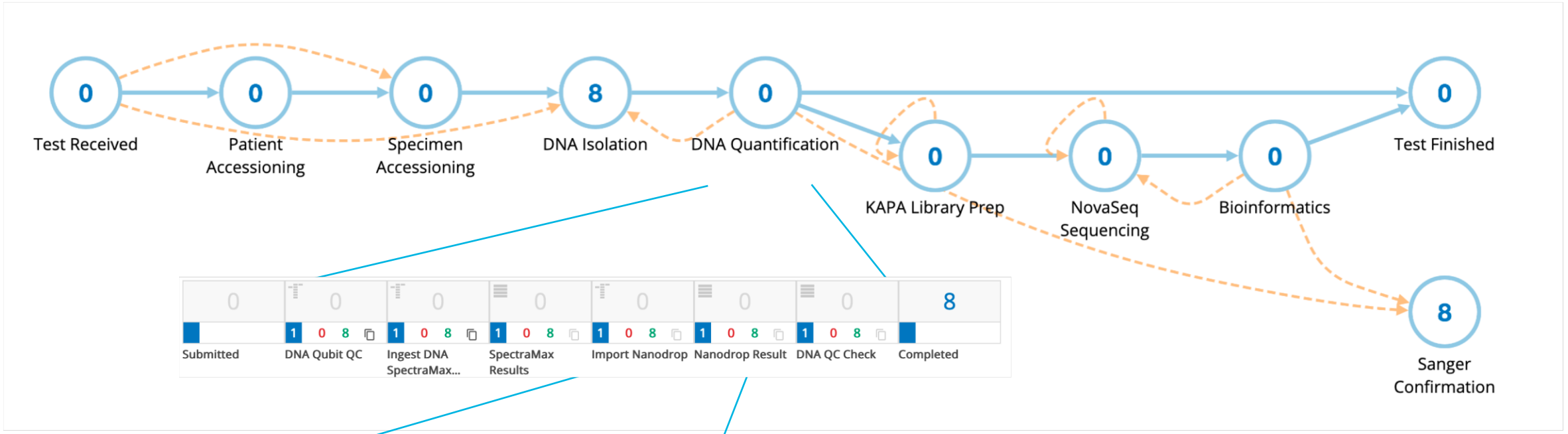
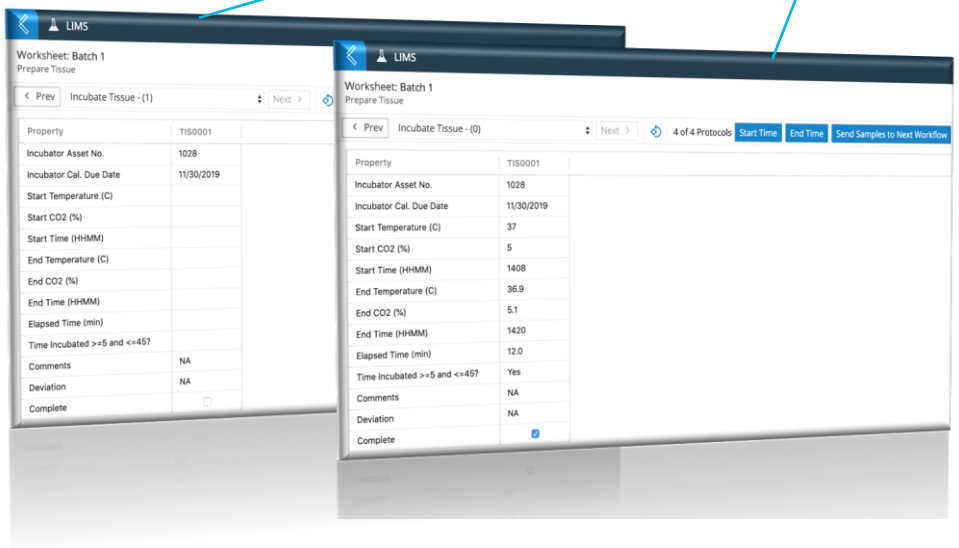
workflows integrate data, process, analytics + reporting





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Enterprise Scientific Platform (ESP)
Overview

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L7's Enterprise Scientific Platform (ESP): workflow + data integration to reduce complexity

- WHAT IS ESP?

- ESP is a foundational data software platform for integrating complex scientific operations and facilitating complex bio-process manufacturing.

- HOW DOES ESP DO IT?

- By connecting systems, cataloging data, and optimizing processes, ESP is uniquely built to address operational needs, alleviate pain points, and increase efficiencies.

- WHY DOES ESP MATTER?

- Synchronized systems yield operational, product, and customer excellence, and help reduce the overall costs from drug discovery to precision medicine treatments.

- REVENUE MODEL

- One (1) to Three (3) Year Contract
- Annual Software License based on number of users and solution components (Unit of Value)

- SOLUTION COMPONENTS

- ESP Platform
- Apps
- Connectors
- Custom Development
- Hosting (When Not On Premise)
- Professional Services

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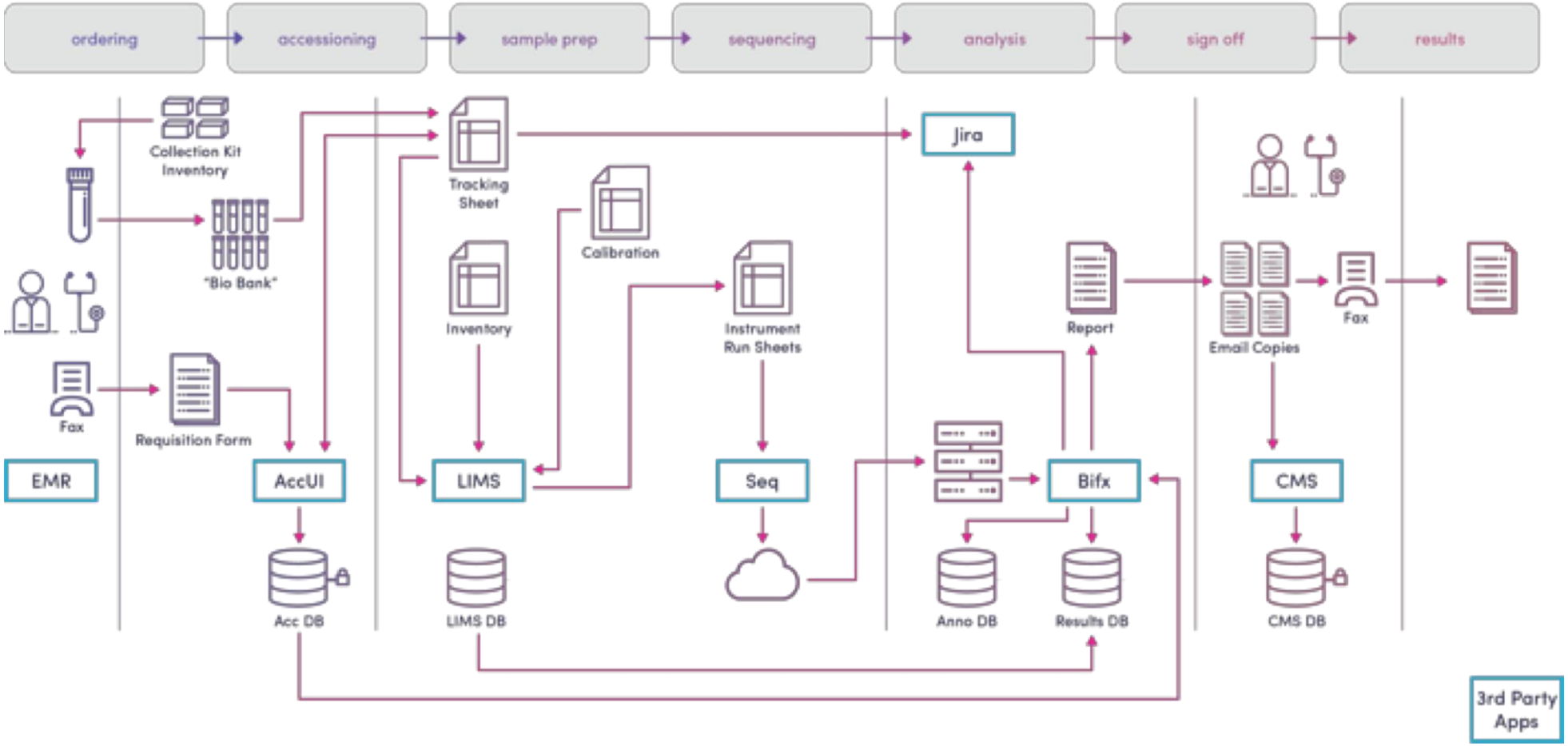
precision medicine workflow before ESP

Patient Sample Flow – “Traditional” Approach



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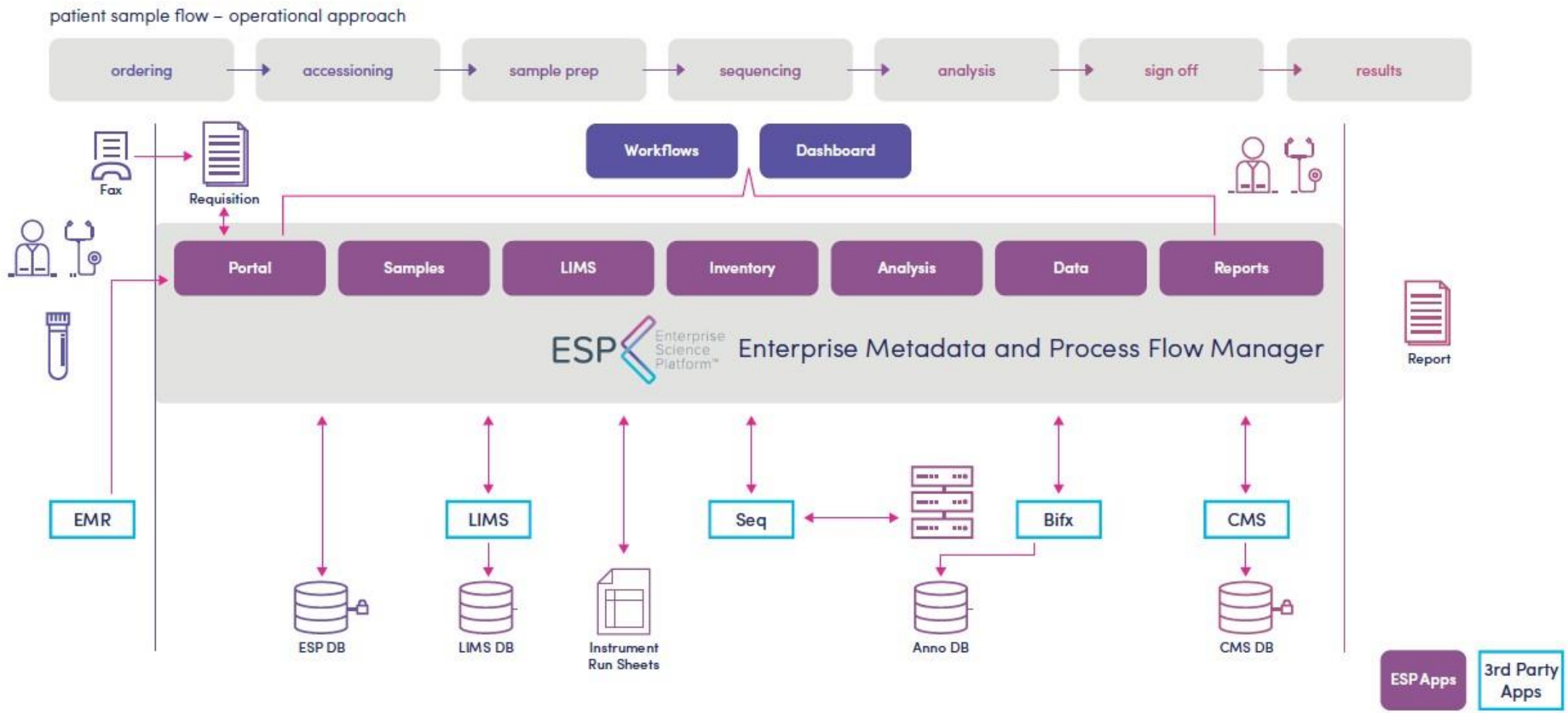
precision medicine workflow with ESP

Patient Sample Flow – Operational Approach



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legacy data and process silos continue to exist

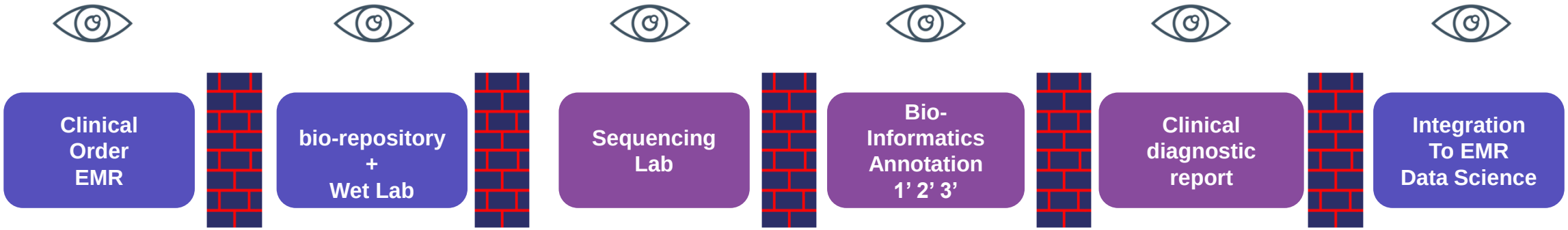
Hinders efficiency and science, increases risk for business and patients

Workflow Efficiency ↓

TAT/
Scientific Insight ↓

Regulatory Risk ↑

Data Integrity ↓



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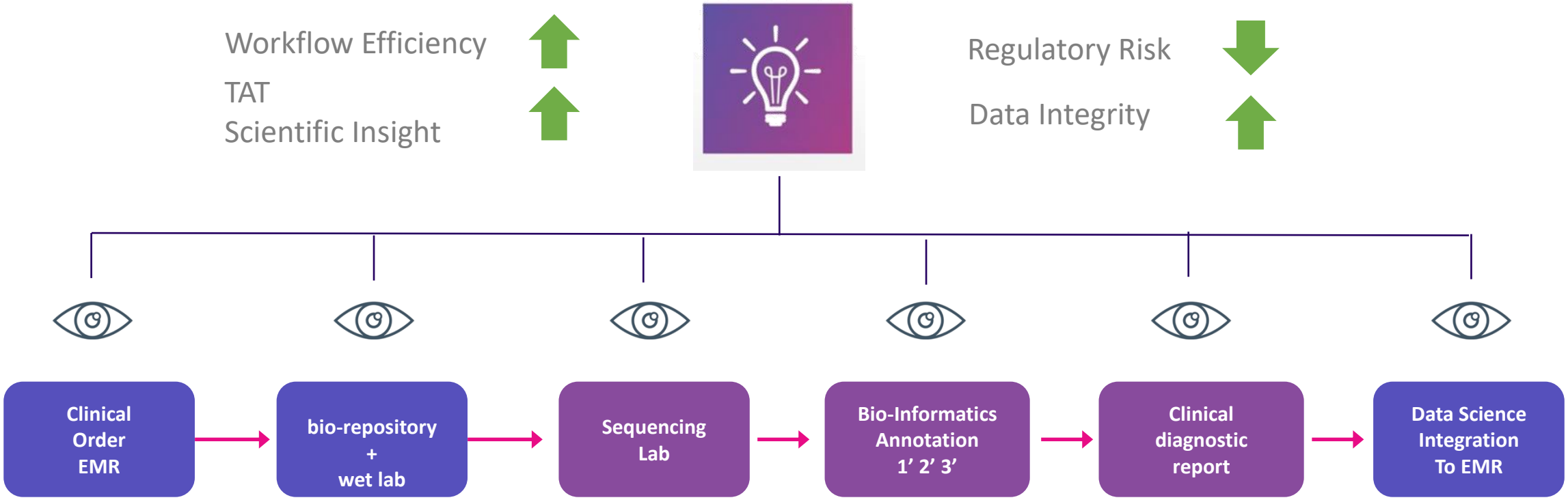
solutions are needed to improve data integrity

Better for patients, better for business



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thank you

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