ESP Enterprise Science Platform™

L7INFORMATICS

ESP Solution: Precision Diagnostics

introduction

With the advent of next-generation sequencing (NGS) and complex analytics such as bioinformatics and AI/ML, next-generation diagnostics companies are dealing with complex processes, large volumes of data and integration of wet lab with computing lab. There is a need for a data and process automation platform that allows diagnostics companies to rapidly setup complex assays and automate the entire "diagnostic order" to "report generation" process and collect all the scientific, quality and regulatory data across the process with full data provenance and audit requirements.

L7's Enterprise Science Platform (ESP) is a scientific information management (SIM) platform that enables diagnostic organizations to use a single platform for registering and processing samples, running complex analyses, and delivering data to physicians and patients. ESP provides complete end-to-end assay automation and is designed to increase reproducibility and efficiency while decreasing errors and turnaround time.

the challenge

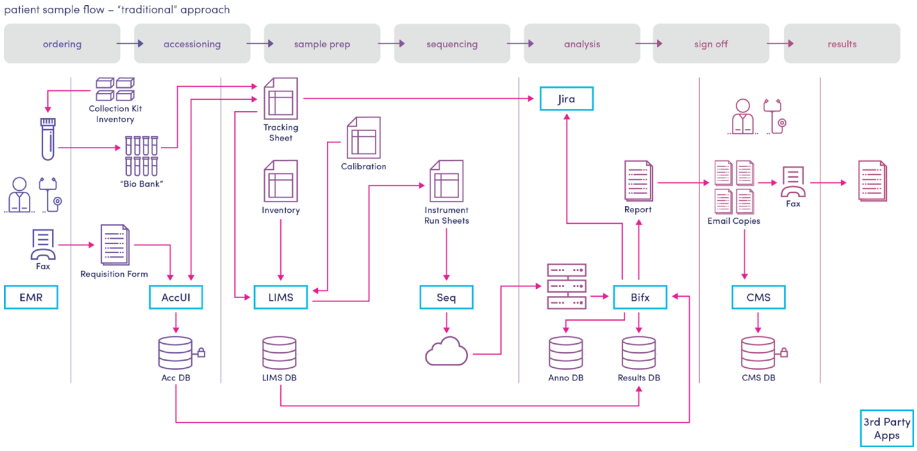
There are many challenges including:

1. Bi-directional integration to various electronic medical records systems in the market
2. Lack of real-time visibility to the final report generation so that providers know the expected date of report and plan treatment accordingly
3. Complex integrations to new and old instruments across wet lab sequencing and bio-informatics (primary, secondary and tertiary analysis)
4. Ability to plan lab resources and manage normal and stat orders on the same system.
5. Lack of instrument validation and reagent inventory management that is integrated into the LIMS systems.

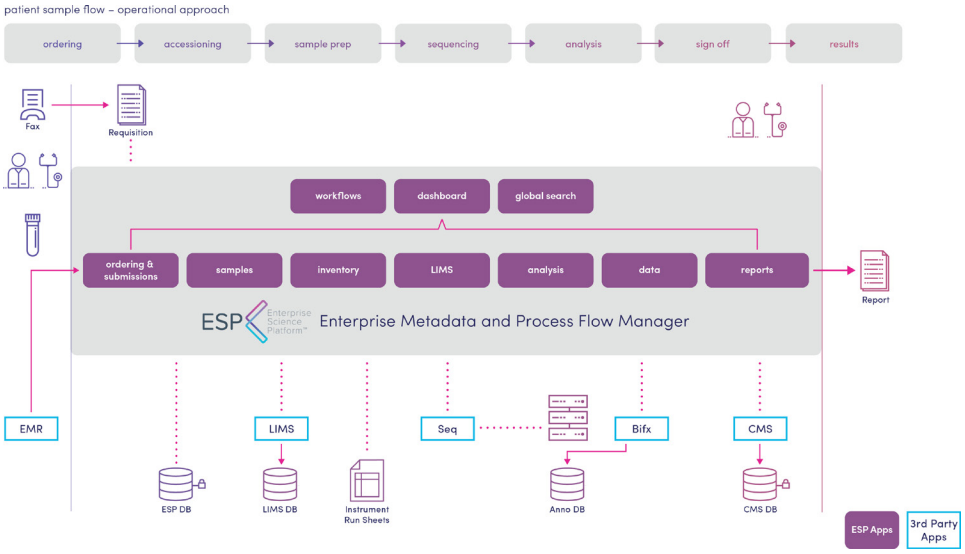
ESP delivers quantifiable business impact

1. Improved regulatory compliance. ESP is GLP, GCP and GMP compliant platform.
2. Increased quality of tests performed due to automated SOPs with a seamless integration between wet lab and compute lab.
3. Improved efficiency and Faster turn-around times (TAT) & Lower cost with more efficient utilization of resources and inventory.
4. Real-time visibility to "where is the sample?" and the status of the " where is the report?" to internal account teams as well as ordering providers.
5. Real time integration to Instruments, CRM systems, Ordering systems and EMR systems
6. Check inventory and instrument readiness prior to test start.
7. Automated reordering of reagent inventory
8. Integrated freezer and location management.

Without ESP



With ESP



L7 breaks down process, technology and inter-departmental barriers to reduce and streamline the "diagnostic order" to "Clinical report" time

why customers use ESP

- Rapid Implementation: from kick off to go-live: in as little as 3-4 weeks
- Configuration vs. customization: easy-to-use interface supports the automation of complex life science processes
- Large library of pre-built connectors to life sciences instruments and software tools
- Extend capital investment shelf life: overlay ESP on top of legacy lab and process equipment
- Extensibility – new assays, apps and connectors can be built by users

pre-built connectors

- NGS (NextSeq, HiSeq, MiSeq, iSeq, Novaseek, RS II, Sequel, ON Torrent, Sanger)
- Wetlab (LightCycler, LabChipGX, Spectramax, Biomek)
- QC Instrumentation (BioAnalyzer, NanoDrop, QuBit, DropSense, Tapestation, Fragment Analyzer)
- External Systems (LIMS, ELN, Billing Systems, EMR, ERP, Inventory Management, Shipping, Ordering, Label Printing)

pre-built apps

- Samples, LIMS, Locations, Inventory, Projects, Data, Analysis, Global Search, Ingest Data, Admin & Dashboards

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1219 West 6th Street | Austin, TX 78703
888.461.5227 | L7informatics.com | info@L7informatics.com