L7INFORMATICS

Case Study
Agriculture and
Agri-Food Canada

Agriculture and
Agri-Food Canada
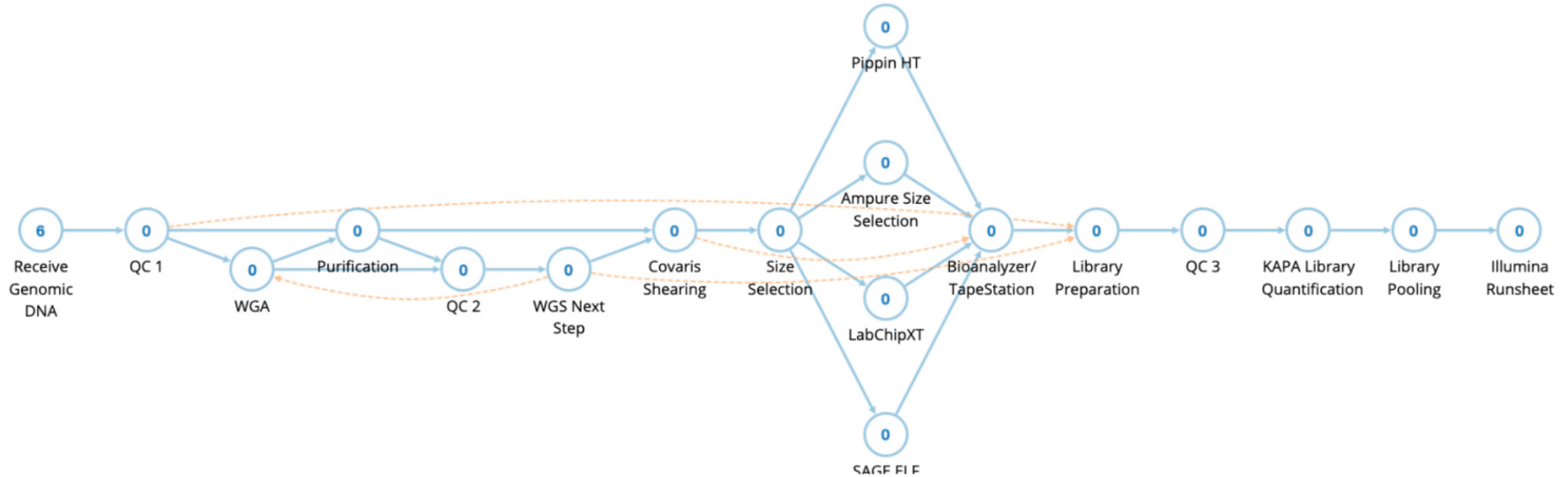
Agriculture and Agri-Food Canada

The Challenge

Agriculture and AgriFood Canada (AAFC) was previously using GeneSifter. However, they lost technical support, which rendered the platform virtually unusable. Implementation involved migrating AAFC's usable content from GeneSifter into L7 Informatics' Enterprise Science Platform^{TM} (ESP), as well as expanding support to the new workflows that could be handled by GeneSifter.
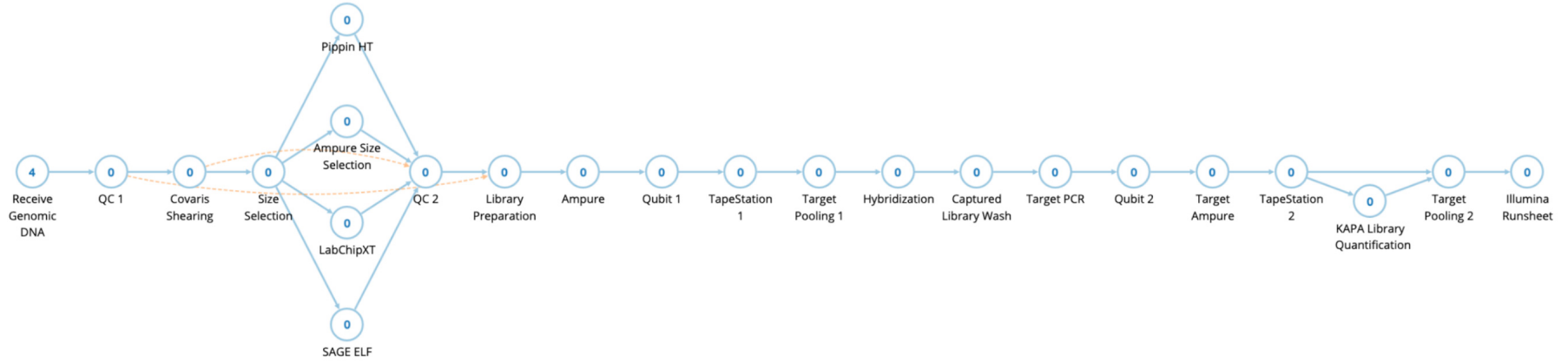
The Solution

- to provide ESP support for all of their workflows, and
- to optimize AAFC's lab staff time by
  - integrating with multiple lab instruments to automate and streamline data collection and
  - facilitating AAFC's staff-customer communication.

Agriculture and Agri-Food Canada

Workflow chain of the WGS process implemented at Ag-Canada

Agriculture and Agri-Food Canada

Workflow chain of the Target-Enrichment process implemented at Ag-Canada

Ag-Canada pain points and solutions

Pain Point	Solution and Value Provided
Customers would email Lab Managers to submit samples for processing,	Customers can log into ESP and submit orders containing samples for processing. AAFC's staff can review the order and submit the samples for processing, which reduces staff admin hours and improved customer service
Customers would email Lab Managers to inform them of the reagents they used or needed	Customers can log into ESP and submit an inventory order. ESP updates the remaining inventory and notifies AAFC's Managers if they are running low on inventory item(s) improving staff utilization.
Customers would email Lab Managers to receive updates on their samples	Customers can log into ESP to check the status of their samples and download any associated files when available, improving customer service and staff utilization.
Tracking services provided for different customers was cumbersome	Lab users can choose to associate a service charge after applicable steps are completed. Then, AAFC's Managers can access a report that takes start/end dates and summarizes all services and charges for each customer. This streamlines invoicing and reduces human error, improving customer service, staff utilization and revenue collection
Instrument Integrations	L7 provided runsheet generation and data ingest for all currently used instruments: Bioanalyzer, TapeStation, QuBit, DropSense, LabChip, KAPA assay, Sanger and fragment workflows (ABI), Illumina MiSeq, Illumina NextSeq. This reduces scientific data entry errors and improved productivity of scientists.

L7INFORMATICS

Case Study: AAFC Summary

demand for ESP:

GeneSifter (LIMS) is losing support from PerkinElmer.

Functions: lab workflow management, basic instrumentation integration, data tracking, customer order management, inventory management, preliminary invoice generation for completed work

IT SETUP

- Cloud instance accessible by AAFC & L7
- On-premises setup: "ESP deployment bundle"
- Mount points for applicable instruments & data files
- Active directory integration

SCIENTIFIC PROTOCOLS

- GeneSifter (7 protocols)
- Mate Pair (2 protocols)
- NeoPrep (3 protocols)
- Tailed Amplicons MiSeq

CONNECTORS

- Runsheet generators for Illumina instruments
- "Plate Sheet" generator for Sanger setup
- ABI results ingest tool
- ABI chromatogram viewer

INVENTORY APP

- User & technical requirements
- Inventory type definitions
- Initial inventory items loaded into test/dev environments
- Inventory actions integrated into workflows
- Inventory reports available

BILLING & REPORT APPS

- User & technical requirements
- Lab & billing reports implemented in ESP

L7INFORMATICS