Infinity:	Engineering
Client:	Scottish Enterprise / Infinity
Project:	Production Optimisation
Scope:	R&D Production Optimisation Software (Prodigy)

Background

The R&D Project was born from the typically bureaucratic process associated with production optimisation engineering scopes. Infinity has carried out numerous production assurance studies which have proven that substantial gains can be achieved. However, these studies can be expensive and time consuming, and the optimisations which are identified taper off in effectiveness with the ever-changing nature of an oil and gas field.

Infinity set out to establish the readability of a software that once implemented could be used to quickly and accurately identify system operating optimisations using live data and production assurance principles.

Challenge

To use the production assurance best practice rules and lessons that Infinity have accumulated over the years and implement these within a software. A running matrix was generated using a pre-defined algorithm that will encapsulate production optimisation goals together with system wide specifics unique to the client's system.

Prodigy will use live field data which is already collected by the Operator. Data is processed in real-time or with the most current set of information available. To achieve maximum potential return from an asset it is vital to identify the best operating process based upon live field conditions of the asset.

Once successfully implemented it is believed that Prodigy will significantly aid with life extension of assets and unlocking new developments which may have previously been deemed uneconomic.
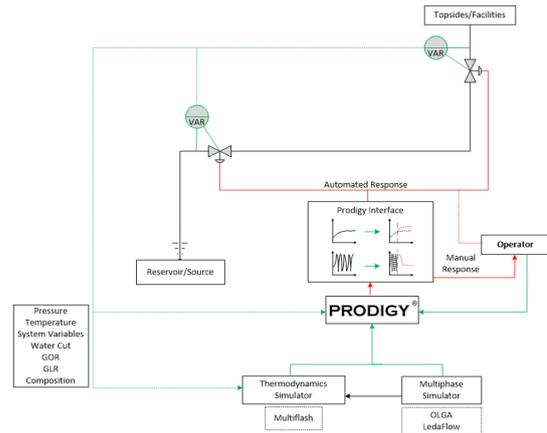
Results

Infinity with part funding from Scottish Enterprise successfully completed a feasibility study for Prodigy. The conclusion of which suggests that production increases could be in the region of 10-15% and substantial cost savings in areas such as chemical injection can be realised.

Infinity's goal is to develop the Prodigy software with a user-friendly interface. It will be so simple to use that any process or operations engineer in charge of the relevant asset can utilise it. The Prodigy background tools and algorithms will be of high complexity and will include specialised flow assurance and multiphase dynamics goals that accumulate years of experience from the flow assurance engineers developing it. However, the user will be shielded from this complex information. The communication with the software will be based on simple language with the ultimate goal of translating complex systems into easily tuned variables targeting real solutions.

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