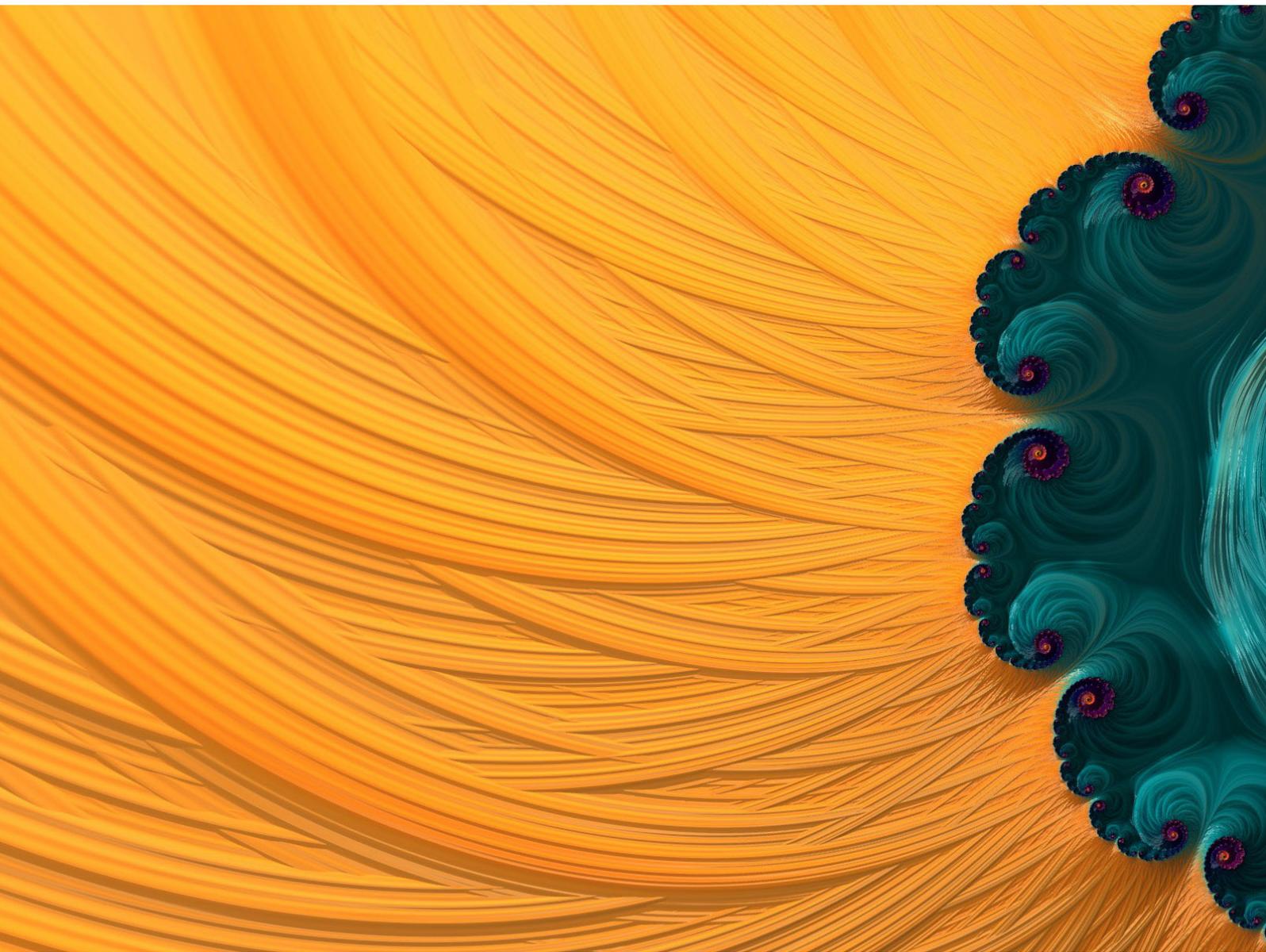


asset *hive*

The Digitalised World

A GUIDE TO WORKFLOW ENGINES

Volume 3



WORKFLOW ENGINES

A workflow engine is the centrepiece of your digital transformation. Once data has been collected, harmonised and attached to a workflow, it is the job of the workflow engine to execute the task.

What is it?

To understand a workflow engine let's start with a workflow. A workflow is typically a series of actionable tasks that lead to accomplishing some sort of business goal.

These are not one-off tasks, they are something your business does on a regular basis.

A workflow engine is therefore designed to understand the order of the process, any dependencies and who is responsible for executing the steps (tasks).

In the context of digital transformation, many digital technologies can make a valuable contribution, however, many technologies also fail to fundamentally improve workforce efficiency and reduce costs.

This is because many digital initiatives tend to focus on automating a specific aspect of a process without integrating technologies with people and how they work.

In understanding the value of a workflow engine to your company operations, consider a large infrastructure asset and the workflows that keep the asset running optimally.

A significant amount of time is spent gathering and reviewing information that feeds into the planning cycle, followed by budgeting and scheduling activities, work orders, executing activities, and updating sources based on outcomes.

To radically improve these processes, the digital transformation strategy should consider how they can be redesigned so that the people involved with their execution are made more efficient and productive.

Successful digital transformation always considers how technologies will be used by people and how they can be integrated into operations.

Workflows can be set up in any number of custom configurations. It is the job of the workflow engine to take its cue from the workflow design and empower those involved in the execution of the workflow - this is human centred digital transformation.

Why should I care?

If effective digital transformation is the objective, a workflow engine is the engine which drives it.

Applying sensors, creating data hubs or data lakes without being attached to a workflow engine is like building a car without an engine - the car might look good but you'll never take it out on the freeway.

To understand the value in a real-world context, consider for a moment an offshore oil rig without a workflow engine.

The site sensors collect data which is then sent to a data hub to be harmonised from which company insights are drawn.

If the workflow connected to this is a manual process, the engineer would inspect the data and request the maintenance team to execute a repair.

Furthermore, all associated documentation required to create a work pack to execute the repair would have to be created manually which often takes weeks at a time.

However, if a workflow engine has been deployed, the data will trigger an automatic alert to the maintenance team highlighting that the equipment needs immediate attention.

More than just an alert though, the workflow engine will define the set of tasks or actions which are to follow to resolve the anomaly identified by the sensor.

These actions may involve an engineering review, identification of a repair method, or a work order to replace the item.

An automated workflow will also allow for a repair work pack to be created on the fly with the required quality documentation packaged and available to maintenance teams in a fraction of the time.

Once the maintenance team has addressed the issue, an alert is triggered back to the engineer and perhaps new parts ordered from the head depot to maintain spares.

Workflow engines play a big role in reducing cost and increasing operational efficiency.

Complex operations collect data on a daily basis, whether through sensors, predictive models or campaign inspections, but the real benefit is in linking the data to a workflow that directly impacts the execution decision or effort.

Whether it's fixing or replacing something in advance of a major breakdown, or streamlining the process to remove certain inputs, these all have a big cost saving implication.

No matter what industry your company operates in (big or small), the result is the same - a workflow engine automates operations, streamlines efficiencies, puts data into action and ensures tasks are executed.

Digital transformation without a workflow engine is simply not digital transformation.

What can I do about it?

Without a workflow engine, your digital transformation is incomplete.

Follow these three steps to deploy a workflow engine at your business.

01

Design with the user in mind

Digital transformation should always consider how technology will be integrated with people and those involved with the execution of the workflow. Designing a process should consider how you would like your workforce to work and how data should be made available to them, with a focus on eliminating redundancies, repetition and unnecessary steps.

02

Put people at the centre

There is a growing chasm between the appreciation of artificial intelligence and the practical intelligence of humans. Put your people at the centre and allow technology to optimise workflows so that your workers can do their job more efficiently. Your people are crucial to the successful implementation and adoption of any technology.

03

Link the benefits

Deploying a workflow engine means that the data you collect will be put to use and actioned. By linking your data to redesigned workflows, you are making sure that the data is consumed in a way which will directly impact your operations. Many businesses implement data driven initiatives but fail to strategically integrate them into workflows that produce savings in cost and time. Invest in technology that will automate tasks and standardise work methods.

Innovator's checklist

Review and redesign process – Remove or minimise activities that involve manual handling and updating of information. A digitalised workflow should aim to directly add or update information as it is created, removing the need for follow-up post activity. The ultimate goal of digital transformation is to make workflows more efficient so your workforce is empowered to optimise their time spent on critical tasks.



Manage continuous change – Allow for continuous change to be incorporated as needed. Digitalised workflows should be easily modified so that changes in process or inputs can be supported.

Identify your workflow owners – Identify the key stakeholders involved in the workflow, across the various phases of the process - from planning to scheduling, to executing and updating activities. Different stakeholders will be focused on different outcomes and hence need to be involved in redesigning the optimised workflow.



Ensure your workflow is scalable - When redesigning workflows, ensure that they can be scaled and integrated across your entire business and operations. Investment into digitalising your workflows should provide a knowledge base that is easily scalable across your operations. As a result, the efficiencies and savings gained will be amplified.

Who is Silverhorse?

Silverhorse Technologies is on a mission to add value for our customers and bring the transformative benefits of digitalisation to large-scale assets.

Our AssetHive platform is a next-generation connector/middleware data hub technology with an embedded workflow architecture which enables efficient, repeatable, accountable and auditable workflows.

AssetHive is an intelligent data hub, customised around your asset to enhance operational efficiency in a low risk and scalable way.

The data hub enables your digital strategy by implementing full cycle, optimised operational workflows. It delivers data insights where they are needed, with transformative, value-adding results.

RECOMMENDED READING



Volume 1
A GUIDE TO DATA HUBS

Volume 2
A GUIDE TO DATA HARMONISATION



www.silverhorsetech.com

London House
Level 5, 216 St Georges Terrace
Perth WA 6000
Australia