

Accelerating your Digital Transformation and Generative AI Adoption

Overview

Software has eaten the world ! Data is the new oil ! and Generative AI is the latest disruptive piece of data monetization technology. Fear of missing out on the data-driven revolution is on every C-suite agenda.

But many firms are struggling to deliver on the change agenda required to unlock innovative new products and streamlined operational workflows.

Over the last 20 years, the tools used to build enterprise data-driven software have not evolved fast enough to keep up with demand, leading to chronic developer inefficiency.

Velox is addressing this by combining modern “low code” development techniques, modern infrastructure (web & cloud) with 25+ years of experience on Wall Street building data-driven businesses, into an application development platform.

vCore, is specifically designed for building enterprise systems that need to operate over complex data eco-systems.

When the decision has been made to invest in digital transformation, putting the ***vCore application development platform*** at the middle of your data eco-system will :

- Reduce the execution risk and time/cost of becoming data driven.
- Shorten the innovation cycle when delivering ongoing innovative change.
- Avoid tying up scarce development resources on non-differentiating software infrastructure.

■ vCore: Information Sheet

vCore enables firms to accelerate their digital transformation and data monetization strategy and is a critical component of any data eco-system. vCore is the data backbone and application framework that is critical to the build and operation of the software required to monetize valuable data assets.

vCore is a technology “platform”

Firms no longer build their own datacenters they use a Cloud platform like AWS. Similarly, firms no-longer build their own enterprise resource platforms they use products like SAP BTP. The power of the platform is undisputed.

vCore is the first development platform targeting digital transformation and data monetization.

Risks of outsourcing critical technology

The vCore platform provides the common underlying building blocks required to build data-driven systems. All the client (problem) specific code is written and owned by the client. Velox offers a high-quality escrow service to ensure the underlying source is always available. Under specific conditions, Velox also licenses a restricted use version of the source code.

vCore architecture

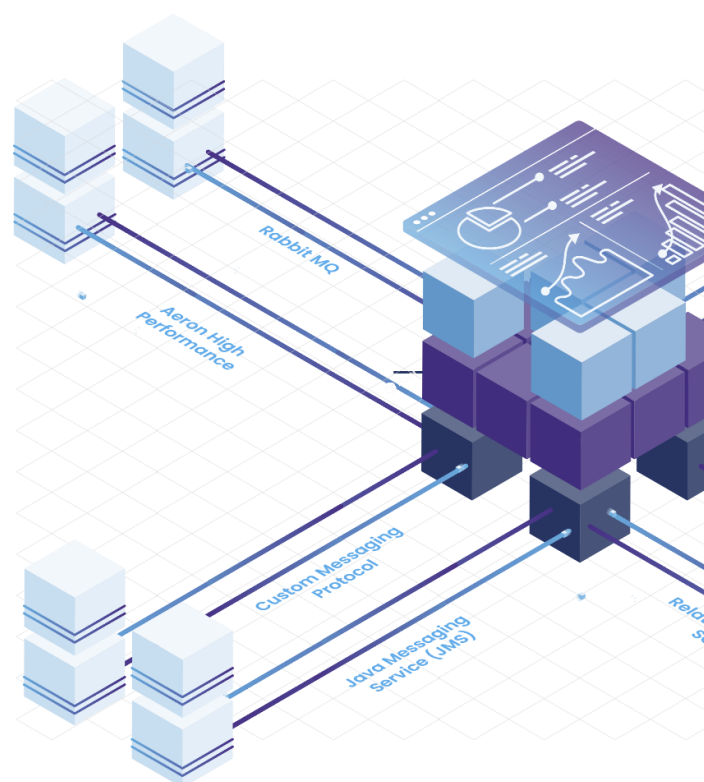
Functional

The key architectural requirements to enabling a data driven business model are i) data centrality and ii) shortening the innovation cycle. When you are *data centric* – the data you need is “where you need it, when you need it and how you need it”. Whether you are an end-user needing to make better decisions, or a developer trying to write business specific software to monetize data, a significant reduction in data wrangling materially shortens the innovation cycle. Less delivery friction means you can monetize new ideas faster than the competition and can dominate in a market where data driven innovation is vital to differentiating your business.

Data centrality is at the heart of any vCore system. Its unique programmable data fabric, allows consolidated access and control of any data resource (reference and real-time, structured and unstructured) in the enterprise without having to create and maintain separate data lakes. Its embedded software development accelerators allow developers to focus more energy on differentiating features.

Technical

vCore provides the core technical components required, not independently, but as part of a cohesive platform; a platform that is designed to help developers build solutions faster. Examples of these components include a scalable, reliable data-fabric, user configuration & workspace management, granular permission management, high performance web UI, event driven management, data persistence, large data set transformation and more.



vCore: Quantifying the Benefits

Being the first of a kind makes it hard to produce objective measures because there is nothing to compare it with. By comparison, the first cloud compute platforms had the benefit of knowing the tangible costs of assets such as bare metal / on premise servers and so it was possible to accurately calculate the % benefit of a cost mutualization compute strategy.

Developer productivity is very hard to measure

For vCore the only real comparison is vs. building a solution inhouse. Making absolute comparisons is challenging because developer productivity is notoriously hard to measure and many enterprises do not know how efficient, or inefficient their internal software development capability is.

Building enterprise software is viciously hard

It's beyond the scope of this paper to discuss in detail but an undeniable fact is that with enough resources, with the right credentials, kept together and focused for the duration of the project, the chances of delivering an enterprise quality solution on time/on budget is slim. The takeaway? You build your own only if you absolutely must.

Buying-to-build. The best of both worlds

Buying vendor software is also not without its challenges and risks. Velox recognizes this and has developed vCore to give the best of both worlds. vCore gives the non-differentiating core infrastructure out-of-the-box ensuring that only software that cannot be bought is built inhouse. It provides the non-differentiating core infrastructure that is unlikely to change, while accelerating the build of unique and differentiating applications.

Quantifying the value of vCore

There is strong evidence to support that vCore provides around 80% of any high-performance, user-facing, data-driven infrastructure out-of-the-box, which in turn provides a convenient way to quantify the benefit of a vCore approach. Therefore, as a minimum, vCore clients should expect to achieve up to:

- 80% reduction in developer costs vs. using another approach.
- 80% improvement in time-to-market of any delivery or enhancement.
- 80% lower execution risk, vs. building a system from scratch.

Using a Proof-of-Concept approach

Investments in solutions like vCore can never be done on faith which is why Velox offers the opportunity to perform a comprehensive PoC, where Velox engineers work closely with a client's engineers on a small prototype that implements part of the client solution.

For C-Level and Board discussions, we can work the client's team to create an appropriate / representative project to tackle in the PoC so the net value creation (combination of the cost reduction and new value produced) can be estimated.

Signal Generation, Monetization & AI

Generative AI is just another data signal

At the core of becoming a data-driven business is signal generation. The questions that the enterprise needs to answer are:

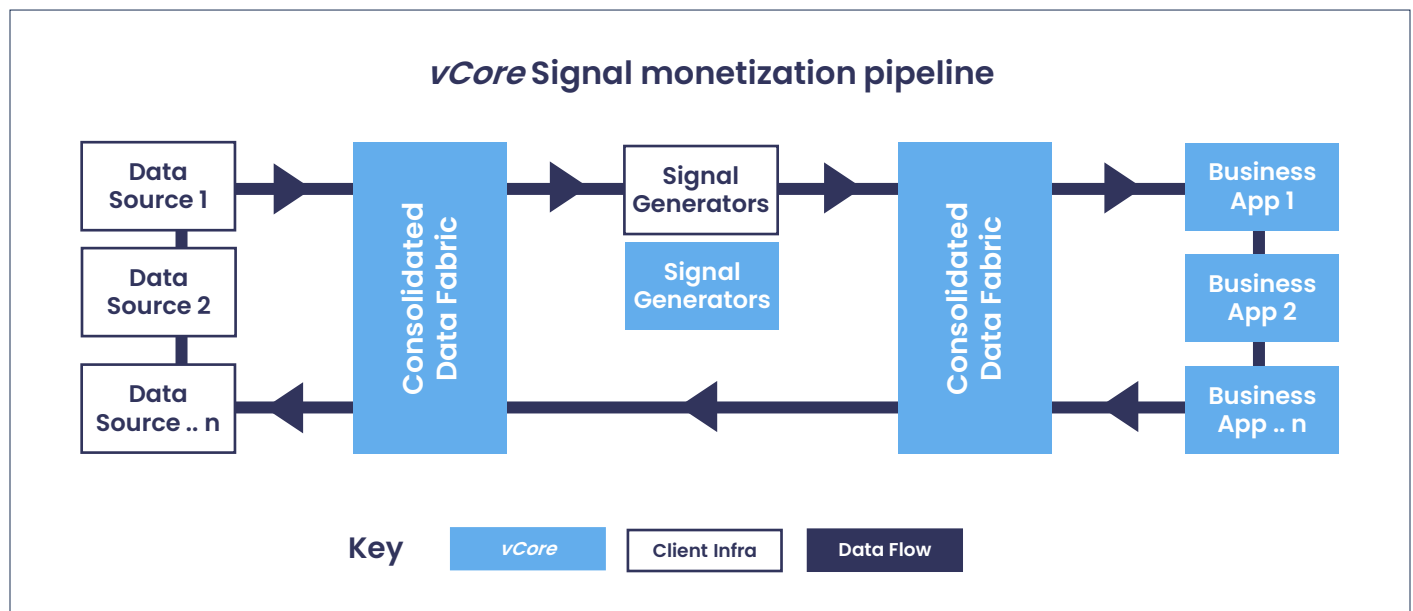
- What data in the enterprise can give an edge, from a product innovation and/or an operational perspective?
- What are the measures (signals) that quantify this data and how can I calculate them?
- How can I use the signal i.e., output data to the function that can act on the insights?

vCore is the data backbone of a signal monetization pipeline

When these questions are answered, whether it be an AI model or another signal generator like a rules-engine or stochastic model, the following problems arise:

- How can I accurately curate the data and present it to the model in a timely manner?
- How can I build applications that can monetize the signals either by informing human or bot decision making?

vCore takes care of making sure any data is “where you need it, when you need it how you need it”, accelerating the build of software that can put the data signals to work.



Use Case

Digitalization of Investment Management

A fund management arm of a top-tier IM has operated the same way for over 30 years, but performance has started to slowly but consistently drop, while costs are slowly increasing. Each fund is managed as its own business and operates in a silo. It uses its own data and decision-making techniques, which are manual. Overall fund performance is highly dependent on individuals and is effectively opaque. Reporting from each of the funds is not timely enough for management to detect and resolve issues before they become externally visible to clients. With each fund operating in a bespoke fashion, moving resources between funds is inefficient due to the steep learning curve.

To stop the decline and position the firm for growth over the next 20 years, the Board wants to implement a far-reaching modernization program of work. The deliverables include:

- Increase the number of performance metrics and the timeliness of reporting to increase awareness and ability to reverse performance issues.
- Augment the investment decision making process with model driven strategies so performance can be more easily tied to the data that informed the strategy while reducing the dependence on individuals.
- Automate the operational functions within a fund to reduce the cost overhead and make it easier to move personnel between funds.
- Make any data and insights available to any fund manager and any fund, so any investment decision can be made with the best possible data.
- Implement a business wide online approval process to reduce the time needed to get all the signoffs required (compliance etc.) to launch new strategies or change existing.

After requesting these changes the Board are informed that a comprehensive modernization of the technology used across the business is required. Among the high-level functional requirements, are the following :

1. A business workflow portal that efficiently orchestrates / automates decision-making across the different control groups.
2. A data and analytical dashboard that gives portfolio managers a single place to share/find critical data resources and improve decision making.
3. An exception-based workflow tool to abstract away the many underlying systems that operations currently use to manage the funds.
4. A single performance dashboard that each day can give a holistic view of fund performance and operational metrics.

The business decide to buy what they can and build what is bespoke to them. #1 can be bought from a vendor but #2,#3 & #4 they must build. vCore is a compelling choice because it provides:

- A solution for the consolidated data fabric that is a key enabler for all 4 of the business requirements.
- A general-purpose development accelerator to build the different applications that cannot be bought.
- A cloud and web browser native solution to advance the firm's flexible working goals and virtual compute strategy.

About Velox

Velox enables software development teams to build data-driven high-performance user-facing systems up to 10x faster.

The Velox full-stack application development platform (vCore) provides professional developers with tools that amplify their expertise in Java and Web programming, allowing them to focus on building differentiating business functionality.

Founded in 2018 by 3 veterans of front-office technology, vCore is the catalyst financial services firms need to accelerate their digital transformation and modernization journey.