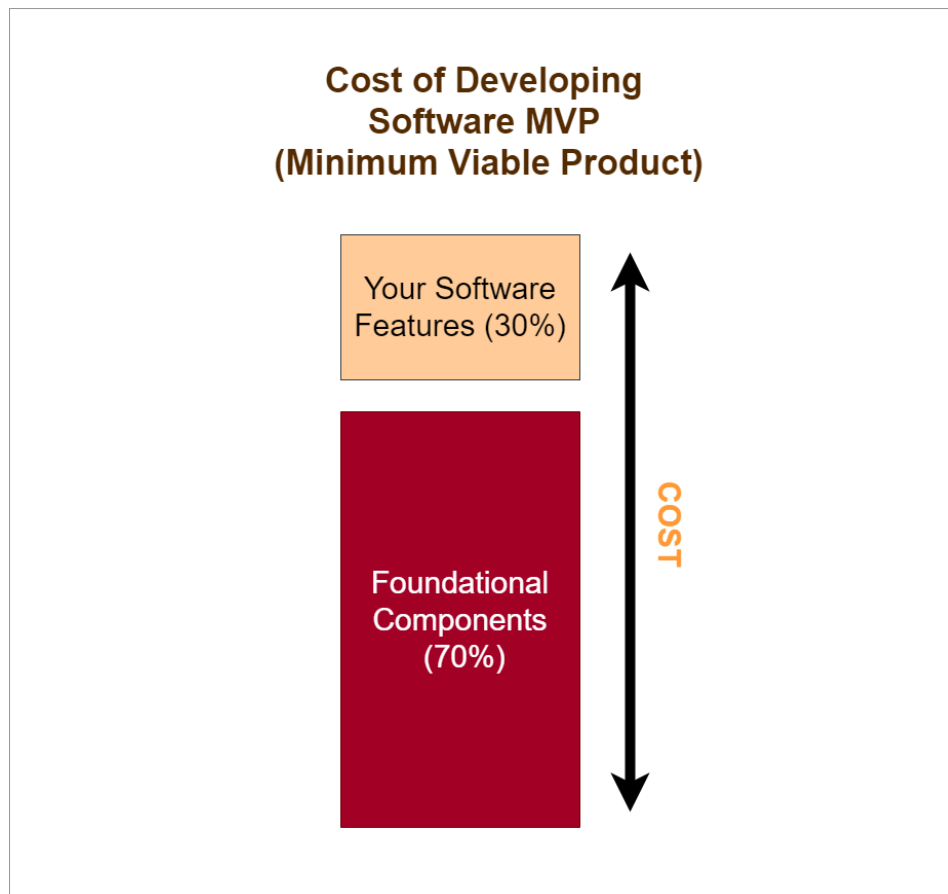# What is Pellerex and How does it help me deliver software faster?

Overview, Products, Scope, and Technical Details

Pellerex is an ecosystem of Standalone and Managed Foundations, APIs, and Live Services to help you build and transform software rapidly. Our foundations will accelerate your time to market by many months, and our APIs will help you focus on your product and not the surrounding infrastructure.

1. Why Do I Need Pellerex?

While developing your MVP for scale, you will spend most of your time (~70%) on reusable foundational elements and only ~30% on what is directly related to your product.

Cost of Developing Software MVP (Minimum Viable Product)

Your Software Features (30%)

COST

Foundational Components (70%)

At a high level these foundational include:

- **Payment Processing:** how you process various types of payments for your customers
- **User Management:** how you perform identity operations such as user management, two factor authentication, user activation, etc.
- **Messaging:** communication (realtime or otherwise) between you and your clients or even between your clients
- **Marketplace:** an e-commerce platform to provide the end-to-end journey to show case and commercialise your digital products
- **Publishing:** managing content, documentations, and blog posts in addition to the reactions and comments from your audience
- **A/B Testing:** understanding your user behaviours and how they are interacting with your product
- **Technical:** all the foundational elements your teams need to set up every time they produce a feature that goes directly into your product, from UI, to APIs, DevOps and Infrastructure. On top of that there are lots of common elements you need to start building your software for scale. Those could include patterns, best practices and templates

Pellerex provides all of these functions in a Managed or Standalone fashion, depending on your requirements.

1.1 Identity

Core Identity operation customisable for our customers:

- Social Login
- User Sign Up
- User Sign In
- Account Activation
- Change Password
- User Profile
- User Access Management
- Multi Factor Authentication

1.2 Payment

Core Payment operations customisable per customer:

- One time Payment
- Recurring Payments (Subscription)
- Switching Plans
- Cancellations

- Plan Management
- Payment Authentication

1.3 Messaging

Core Messaging functions include:

- Sending Emails
- Push Notification
- Live Chat with Users
- Live Chat between Users

1.4 Publishing

Core Publishing functions include:

- Managing Blog Posts
- Post Reactions (Likes, etc.)
- User Engagement
- Commenting

As you can see all of the above components, and services are common across the majority of the products, and work generally the same, and we believe this is not how you would like to spend your time, money and resources on.

This is exactly what Pellerex does for you; Providing all the lego pieces and software building blocks, so you could ship your product to market much faster.

Now let's talk about how Pellerex does it. Next we will look at our Product Streams and how you could leverage them.

2. Pellerex Product Streams

At a high level Pellerex has two main offerings of Hub and Enterprise.

2.1 Pellerex Enterprise

Our enterprise offering provides you with a full software foundation covering the below essential functions deployed on your infrastructure and managed by your team. As it gives you access to the source code, there is no limit for you around what to do next. It comes at all levels of User Interface, APIs, DevOps, Container Engine, and Infrastructure in addition to providing you with all the automation, application and API scaffolds to develop other functions fast.
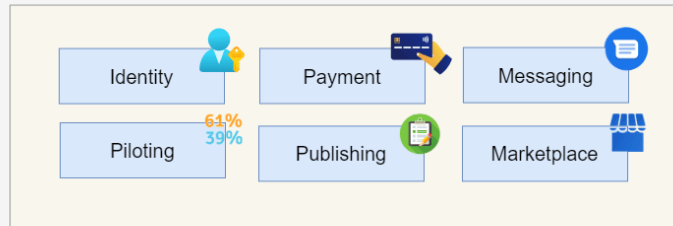
- Payment
- Identity
- Messaging
- Marketplace
- Publishing
- Software Production Line

Pellerex Enterprise

One Click to Cloud landing zones including source code installed on the Cloud

1. Functions

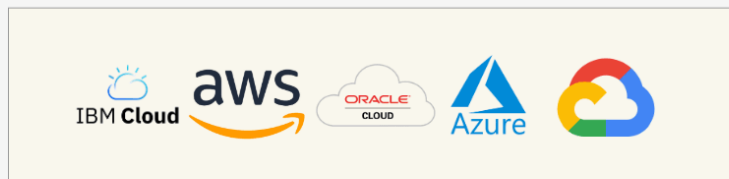Providing the essential functions to support your enterprise software

Identity	Payment	Messaging
Piloting	Publishing	Marketplace

61%
39%

2. Architecture

A true full stack implementation of the above functions

User Interface	Channel APIs		
Core APIs		DevOps (CI/CD)	Security & Compliance
Data			
Container Engine			
Infrastructure			
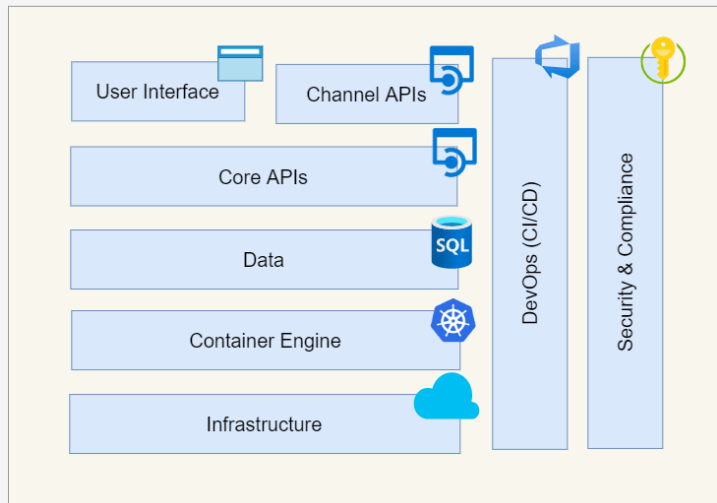
3. Multi/Hybrid Cloud

Comprehensive approach to implementing Cloud-native

IBM Cloud   aws   ORACLE CLOUD   Azure   Google Cloud
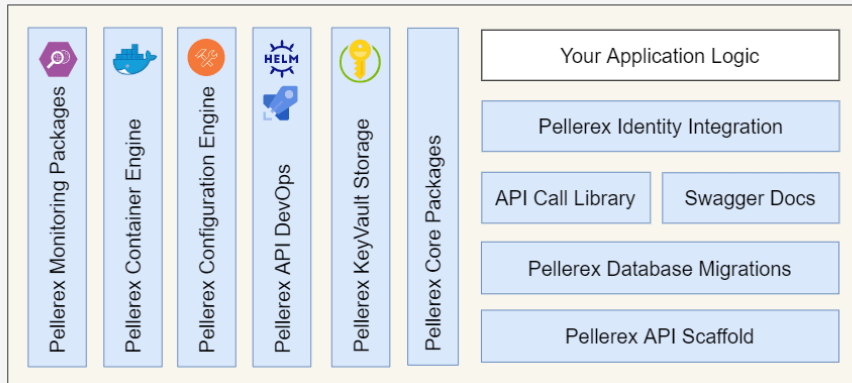
2.2 Pellerex Hub

Offering all the functions of Pellerex Enterprise as Managed Services and APIs running on our infrastructure and managed by our team. You don't have to manage any of the essential services like Identity, automation and DevOps, and everything has been taken care of for you. It comes at a much cheaper subscription based price tag, and your team has all the freedom and flexibility around the code they develop and deploy on our infrastructure.

Pellerex Hub

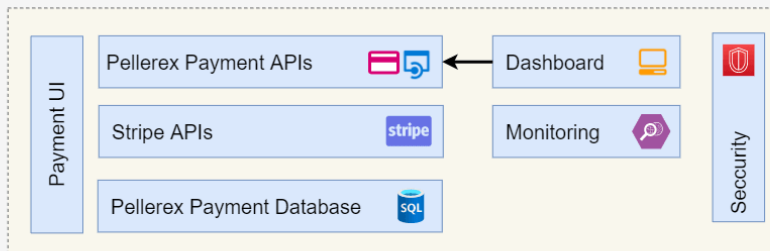Managed Web Services including providing core software solutions maintained by us

1 Managed API Foundation

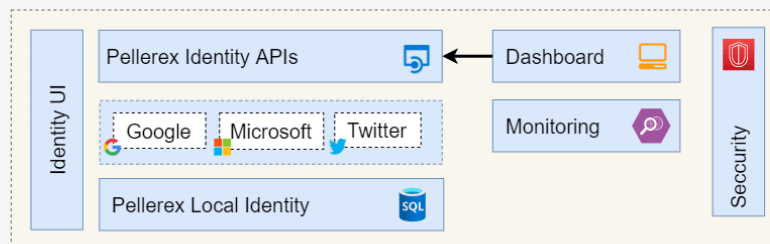Provision and deploy Cloudnative APIs in less than 2 minutes

Pellerex Monitoring Packages

Pellerex Container Engine

Pellerex Configuration Engine

Pellerex API DevOps

Pellerex KeyVault Storage

Pellerex Core Packages

Your Application Logic

Pellerex Identity Integration

API Call Library

Swagger Docs

Pellerex Database Migrations

Pellerex API Scaffold

2 Managed Payment Service

Providing a full stack managed Payment experience

Payment UI

Pellerex Payment APIs

Stripe APIs

Pellerex Payment Database

Dashboard

Monitoring

Seccurity

3 Managed Identity Service

Providing a full stack managed Identity experience

Identity UI

Pellerex Identity APIs

Google | Microsoft | Twitter

Pellerex Local Identity

Dashboard

Monitoring

Seccurity

4 Managed A/B Testing Service

Providing a full stack managed Piloting & A/B testing experience

User Interface

Pellerex A/B Testing APIs

Pellerex A/B Testing Database

Dashboard

Monitoring

Seccurity
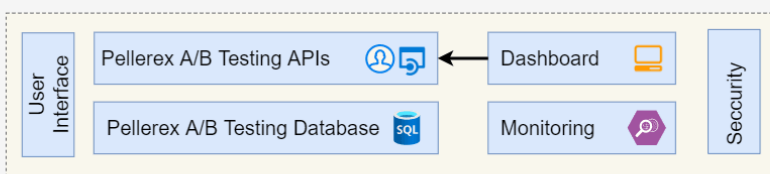
3. Pellerex Hub Overview

Pellerex Hub is the managed implementation of [Pellerex Enterprise](#) which is maintained by Pellerex team and deployed on our infrastructure. It is so easy to use and enables your team to start deploying your workload on the Cloud immediately. You also access a variety of APIs, and Services through our Hub and hence your team can truly focus on what really matters to them, ie your product. Below is a high level representation of its fullstack services and components.

3.1 Included Functions

Pellerex Hub continually expands and we add new functions and capabilities as we go. At the moment here are the list of APIs and Services provided as part of our Hub:

- **Multi-Tenant Identity:** Giving you access to a ready to use Identity service to help you with all aspects of user management and operations.
- **Managed API Foundation:** Helps you stand up your API on the Cloud in less than a minute. It includes setting up your production development environment, and provisioning and deploying your API scaffold on the Cloud along with all the DevOps and CI/CD and infrastructure building blocks.
- **A/B Testing:** A fully operational user testing solution that helps you understand your user behaviour, needs and requirements by offering them alternative solutions.
- **Location API:** Access a wide range of location information about countries, states, addresses to empower your software with geolocation data.

4. Pellerex Enterprise Overview

Our Enterprise offering is a collection of source-included ready-to-be-used functions, at all levels of User Interface, APIs, DevOps, Container Engine and Infrastructure, deployed on your infrastructure and managed by your team. It provides you with ultimate flexibility around where to go next and how to develop it further.

4.1 Architecture & Design

Pellerex has been built for Cloud and using modern platforms/frameworks and following Cloud native development best practices, and hence it is ready to scale beyond limits.

This means you can keep building on top of Pellerex without worrying about your future scale and how much your user base will grow in future.

To support that, Pellerex has adopted Microservices architecture at its core, so for any new feature you stand-up a new one in a matter of minutes and scale your system design.

Below is the high level architecture of the software ecosystem we recommend:
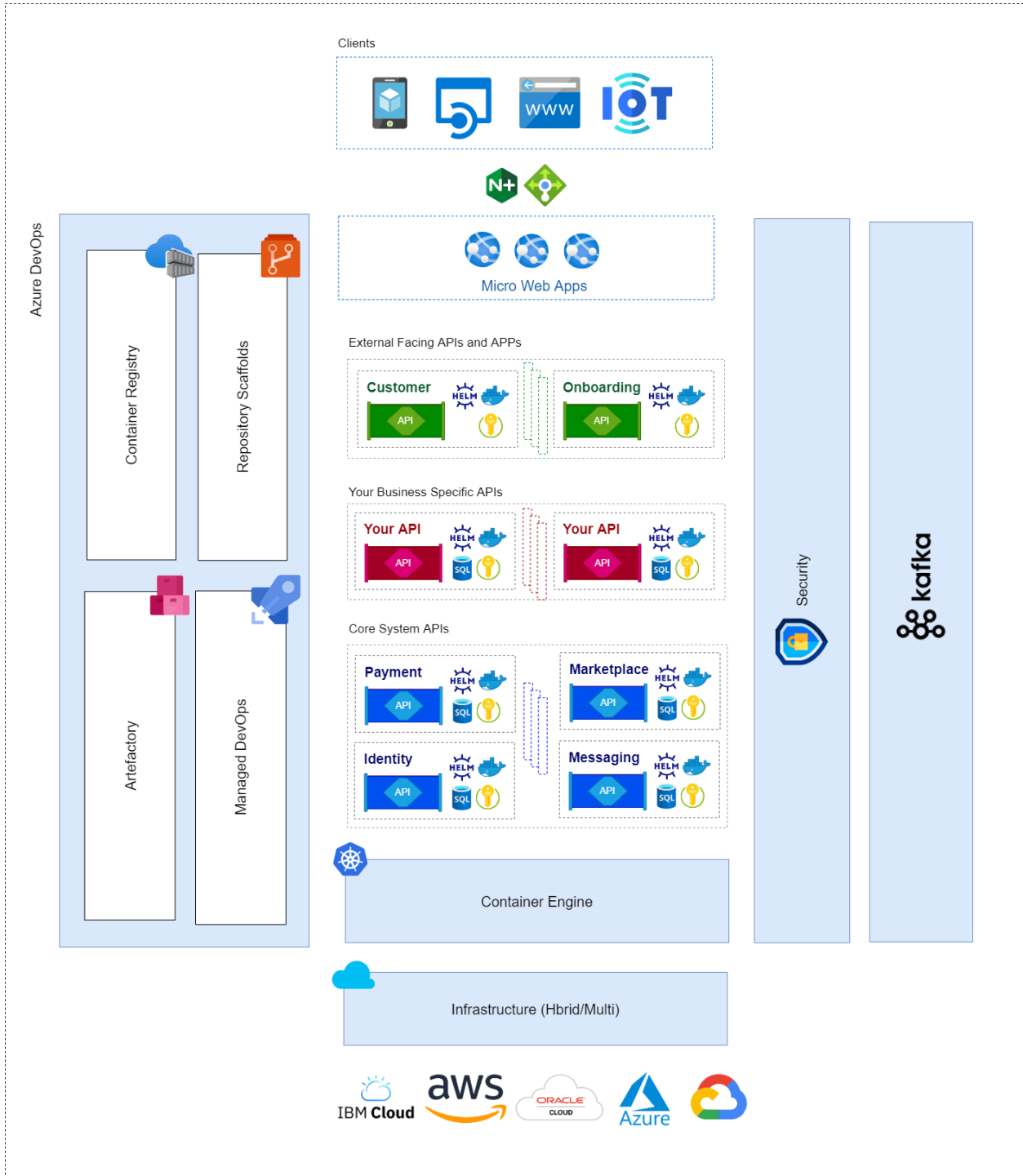
4.2 Benefits

Out of the box, you will tap into the below benefits on day of your MVP development.

4.3 Scalability

We look at scalability from two angles, which are covered in more details a bit later.

- Feature Development
- Workload and Traffic

4.3.1 Feature Development: Loose Coupling

- Microservices

Your software can easily become complex to grow and maintain if the foundation has not been designed for scale. **Loose Coupling** is one of the principles that can help you build and develop scaleable systems as different components can change and evolve at different velocities without impacting other parts of the system.

That is one of the reasons behind choosing Microservices architecture for Pellerex foundation.

- No Frameworks

Building frameworks in your software ecosystem is one of the major blocker for Agility. Frameworks grow in size, and they become hard to maintain and legacy. Also people who built them would leave the team from time to time and you develop key-man risk.

Hence we haven't developed any complex framework at all, but our approach has been to develop ready to use services/microservices to be used as it is in your ecosystem. They include standalone services such as Identity, Payment, Messaging, Publishing (used for content publishers), and locations which work together out of the box in the form of REST APIs.

As you can see adding/removing features to your system doesn't require touching some central framework and doesn't need to upskill yourself with how things work. You just focus on your new microservices and integrate with existing working APIs, which are also running in the same space, so you have full ownership and control.

4.3.2 Workload and Traffic: Auto-Scaling

Now what happens when your workload increase all of a sudden as you ramped up your marketing? How do we make sure your systems cope under workload?

For that reason all our apps and microservices are running as Containers in a Cloud-based kubernetes infrastructure that can be scaled up automatically as your traffic increases and scaled back down as the load decreases on your system.

4.4 Cost

When building your MVP, you need to keep in mind that quick (or possibly hacky solutions and services) will cost you more money down the line as your team keeps building on top of that, and when you need your software to scale you will face limitations, and at that point it is a lot more expensive to fix/replace things or grow exponentially as your user base does.

One of those options that you need to be really careful about is building your products on top of systems like [Wordpress](#). It gives you a quick start however you will have serious limitations when it comes to growth, and scale.

Not all quick options are bad however. You can try platforms such as [Firebase](#), however you always need to consider future limitations and flexibility of your systems. Price is also another factor as the monthly subscription prices on these platforms can get expensive really quick, but it might be too late as you are locked-in, and have built on top.

Low-code and no-code solutions like [Appian](#) fall in the same bucket. Quick start, but soon you will hit the ceiling

The best option in our opinion for a product that is going to grow fast is when you have full control over the assets you build and how you build them. You spend time on the key decision around your code, and infrastructure and you choose wisely. That's why companies hire their own engineering teams and build from scratch. That comes with a big caveat of-course, and that's cost.

The same Cost that push early stage companies to adopt any of the above solutions, and that's why we have created Pellerex and strongly suggest that, as it gives you full control over your code-base and how you design it, while providing everything that you need for your product, and don't want to spend time recreating it, which leads to great cost savings short-term and long.