WSO2CON 2024

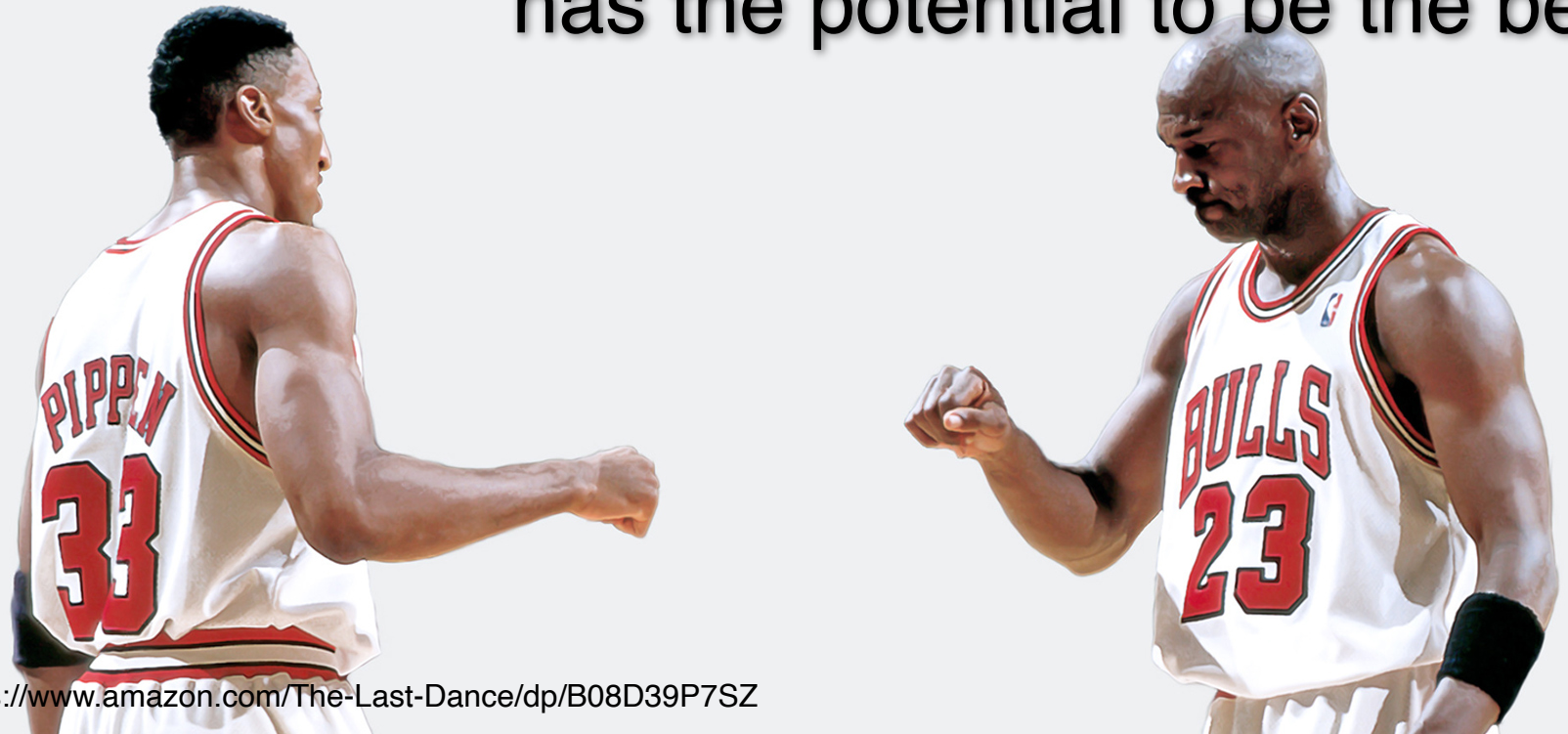
Platfomless Horizon for Digital Adaptability



Asanka Abeysinghe
CTO
WSO2

Every ~~THE~~ LAST DANCE

has the potential to be the best



https://www.amazon.com/The-Last-Dance/dp/B08D39P7SZ

The beginning of my journey into the realms of space and curiosity

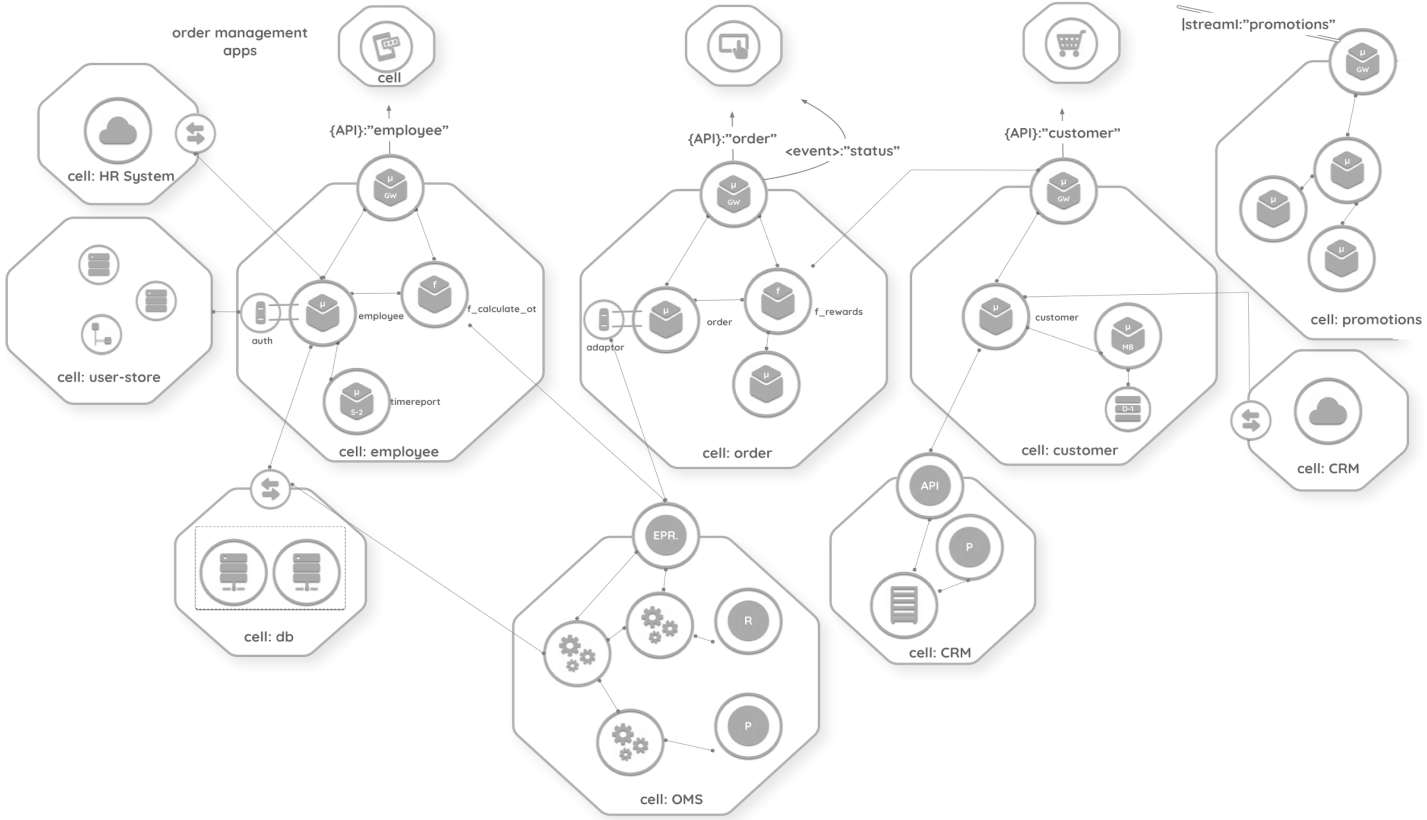
Eighteen months later, the American spacecraft Discovery One is bound for Jupiter, with mission pilots and scientists Dr **Dave Bowman** and Dr **Frank Poole** on board, along with three other scientists in suspended animation. Most of Discovery's operations are controlled by **HAL**, a HAL 9000 computer with a human-like personality. When HAL reports the imminent failure of an antenna control device, Dave retrieves it in an extravehicular activity (EVA) pod, but finds nothing wrong. HAL suggests reinstalling the device and letting it fail so the problem can be verified. Mission Control advises the astronauts that results from their backup 9000 computer indicate that HAL has made an error, but HAL blames it on human error. Concerned about HAL's behaviour, Dave and Frank enter an EVA pod so they can talk in private without HAL overhearing. They agree to disconnect HAL if he is proven wrong. HAL follows their conversation by lip reading.





Photo by Michael on Unsplash

In cell-based architecture, cells forge systems



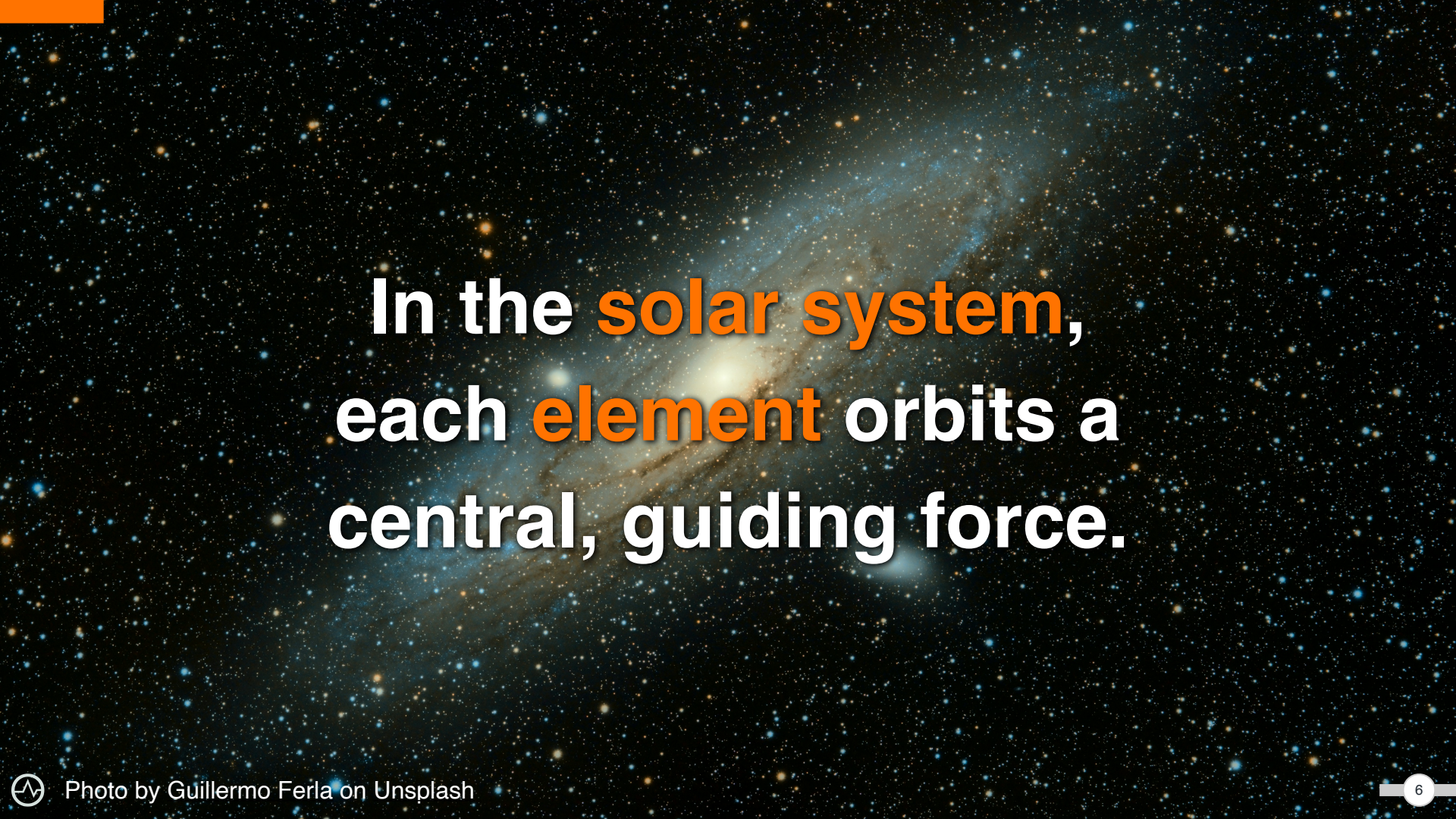
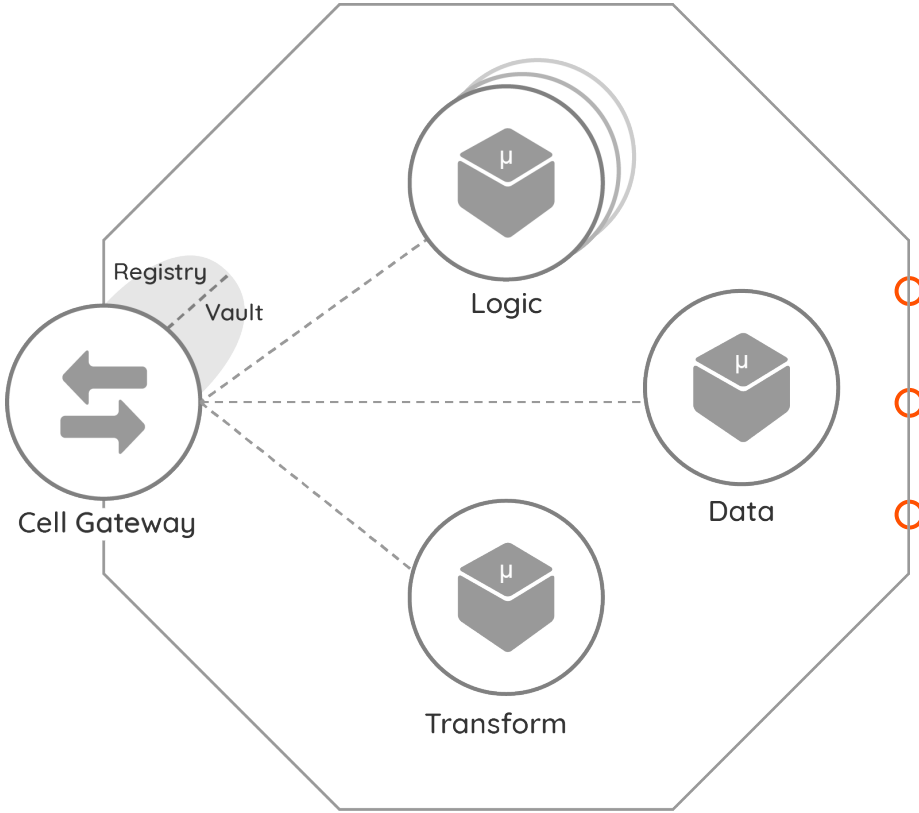


Photo by Guillermo Ferla on Unsplash

A cell is a collection of components fronted by a gateway



Self-contained

Units of enterprise architecture

Independently elastic

Cell-based architecture (CBA)

Cell-Based Architecture

A Decentralized Reference Architecture for Cloud-native Applications

Version: Spring-2024

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- Paul Fremantle | Co-Founder, Founder CTO & Advisor - WSO2, Inc | @pzfreo (Summer-2018 - Spring-2020)

> *This document describes a reference architecture for modern agile digital enterprises. This reference architecture offers a logical architecture based on a disaggregated cloud-based model that can be instantiated to create an effective and agile approach for digital enterprises, deployed in private, public or hybrid cloud environments. In this paper we present the architecture, the approach to applying this architecture, and existing approaches that fit into this architecture. The architecture defined in this paper can be mapped to current architectures as well as used to define new architectures. It is designed to help move from the "as-is" towards the "to-be".*

Introduction

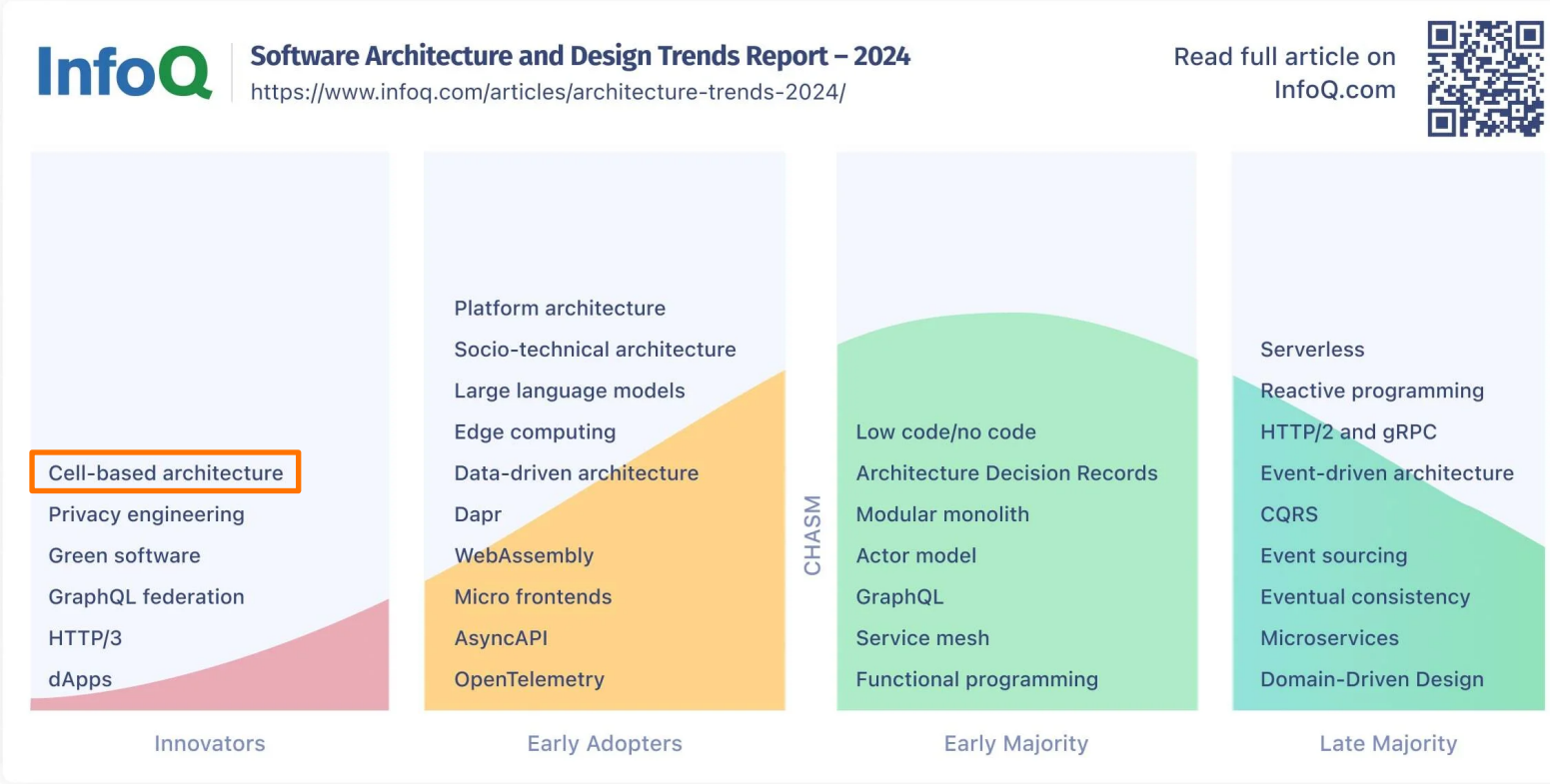
Enterprise architecture has one main aim-to bring structure and organization to evolving systems, thus enabling better maintainability, flexibility, and agility. Enterprise architects have the unending task of trying to bring order to chaos. Over the past five years, a rapid shift has taken place in the agility of software development and in particular DevOps. As a result, continuous integration and continuous deployment (CI/CD) approaches have dramatically accelerated the speed of new deployments of software projects from months to weeks to days to hours. In many ways, enterprise architectures have struggled to adjust. This reference architecture aims to enable an agile

https://github.com/wso2/reference-architecture/blob/master/reference-architecture-cell-based.md



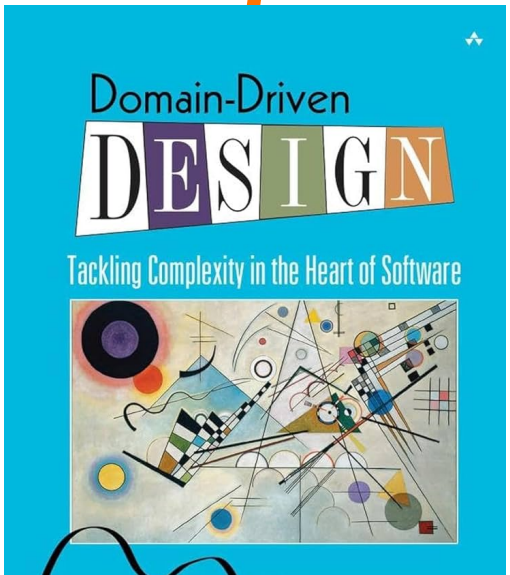
picture credit: https://www.flickr.com/

Cell-based architecture: trending now!



Cells and domains



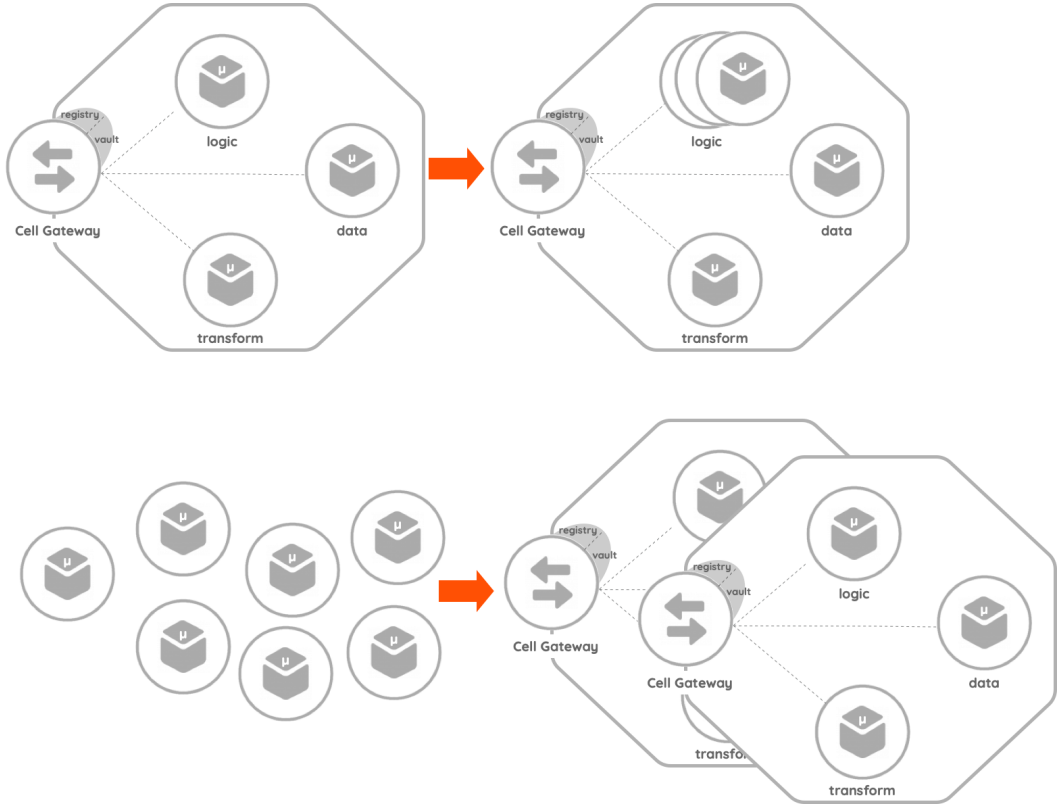




Vaughn Vernon

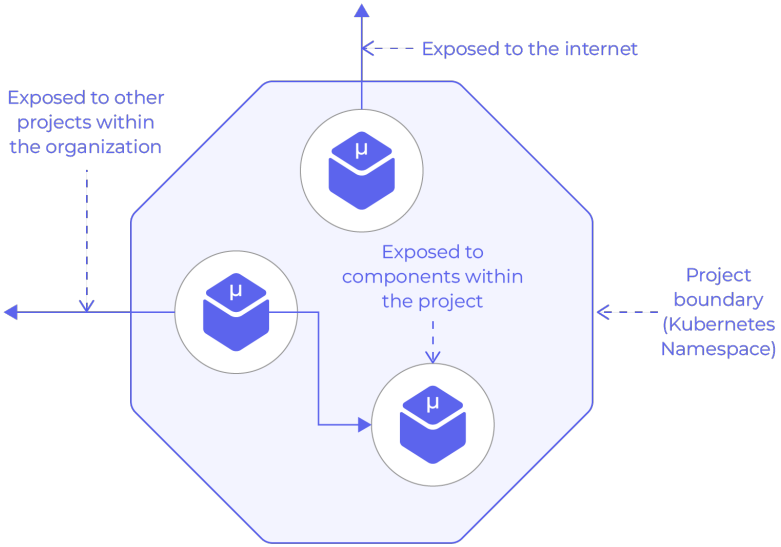
Author, leading expert in Domain-Driven Design

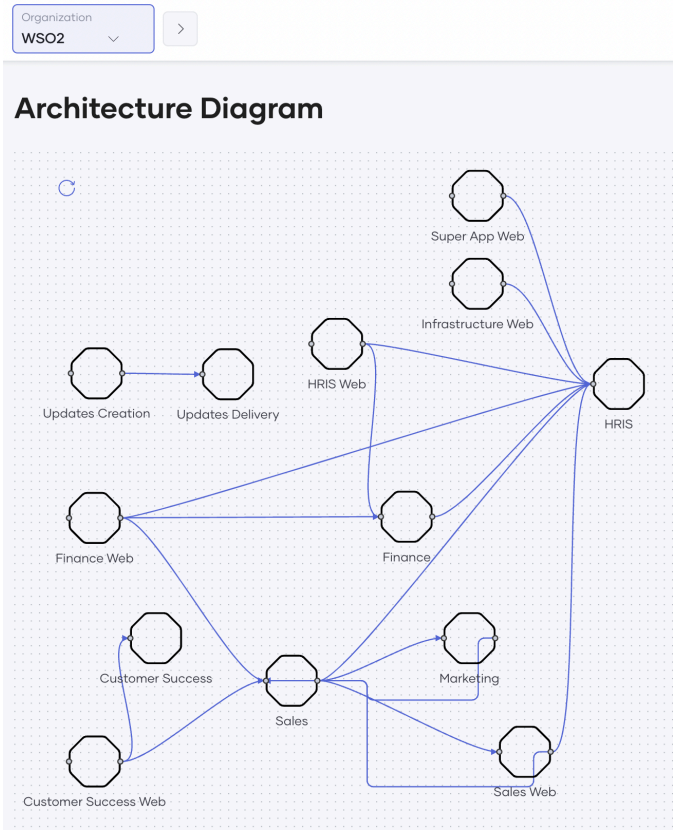
Cell-based architecture is not domain-driven design (DDD)



Modularity & composability

Ref: implementation: Choreo





Technical advantages



Structured agility



Versioned components



Dependency managed



Auto wired



Reusable

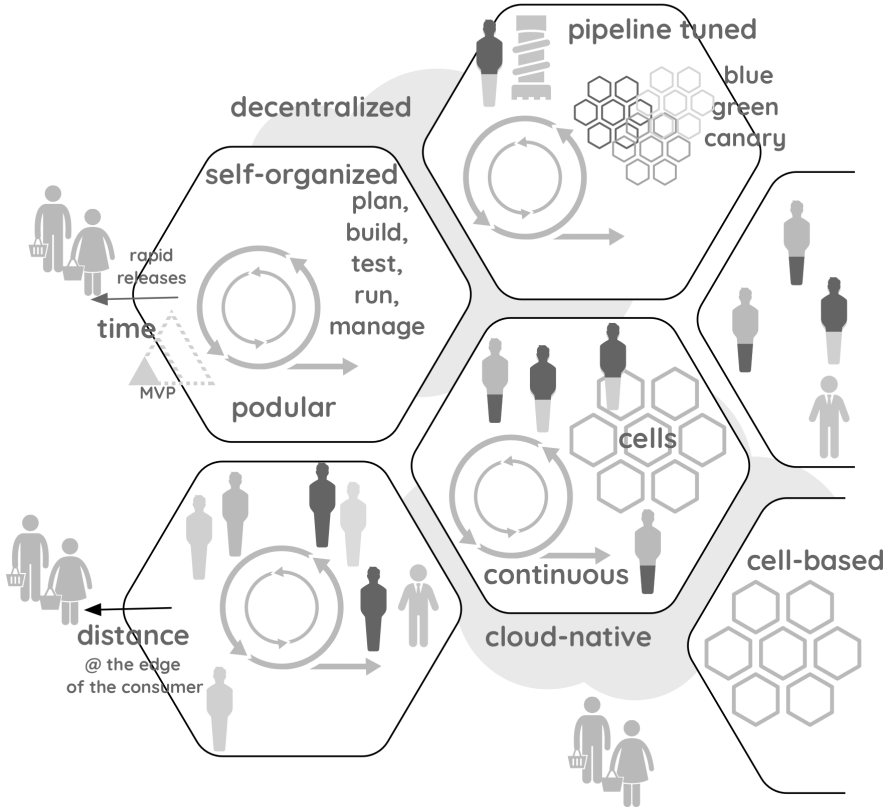


Self-contained



Technology neutral

Human-centric: cellular organization



https://www.forbes.com/sites/forbestechcouncil/2020/06/29/the-cellular-enterprise/

Mastery



Photo by Jamie Street on Unsplash

Autonomy



Photo by Amy Treasure on Unsplash

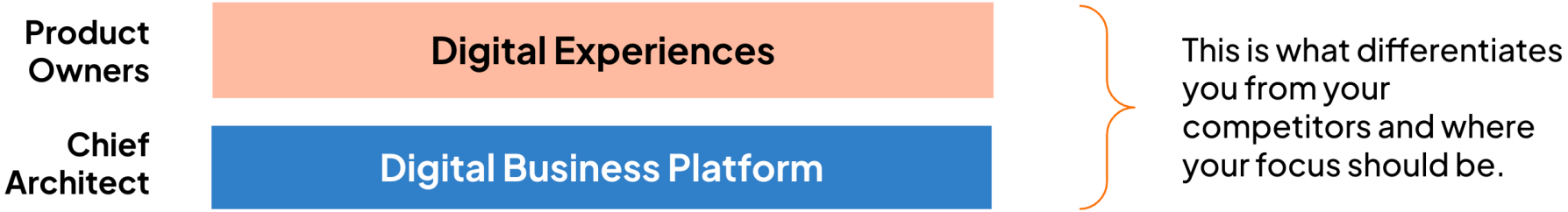
Purpose



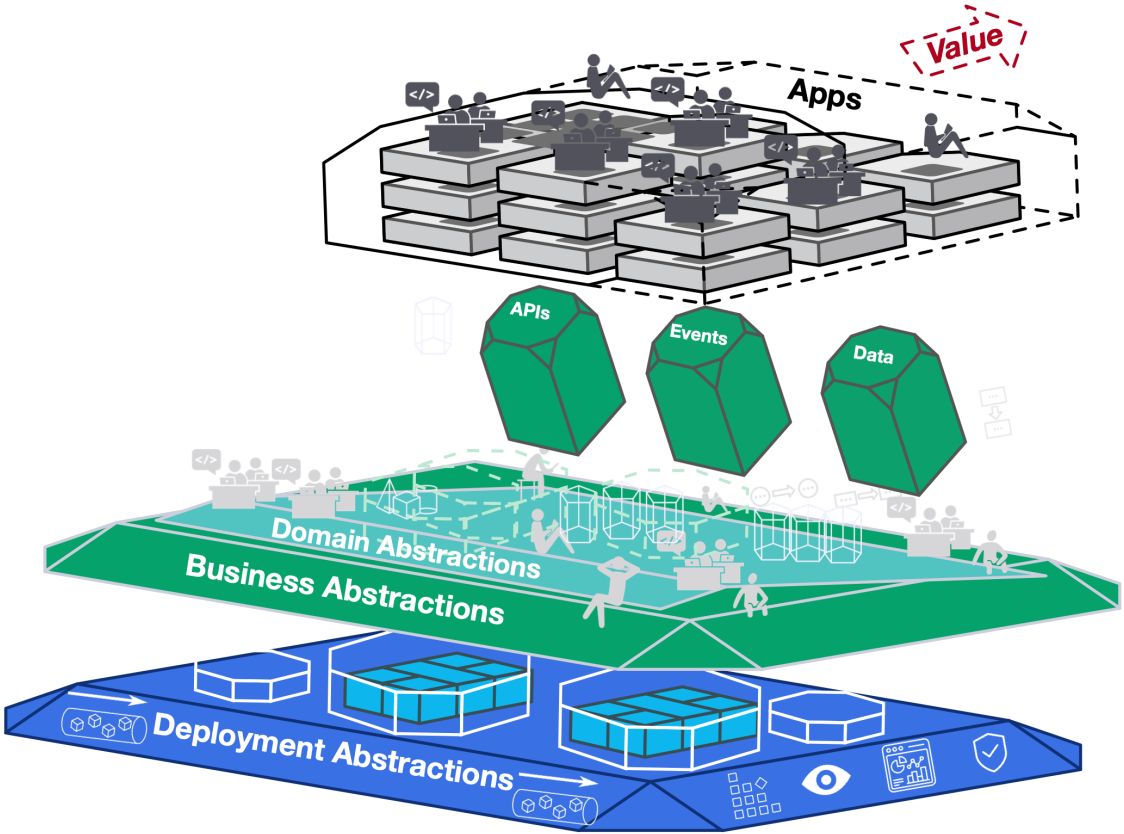
Photo by Jamie Street on Unsplash

Business platform

Platformification of your business capabilities



Business Service Platform



At the end of the day, it all comes down to creating value

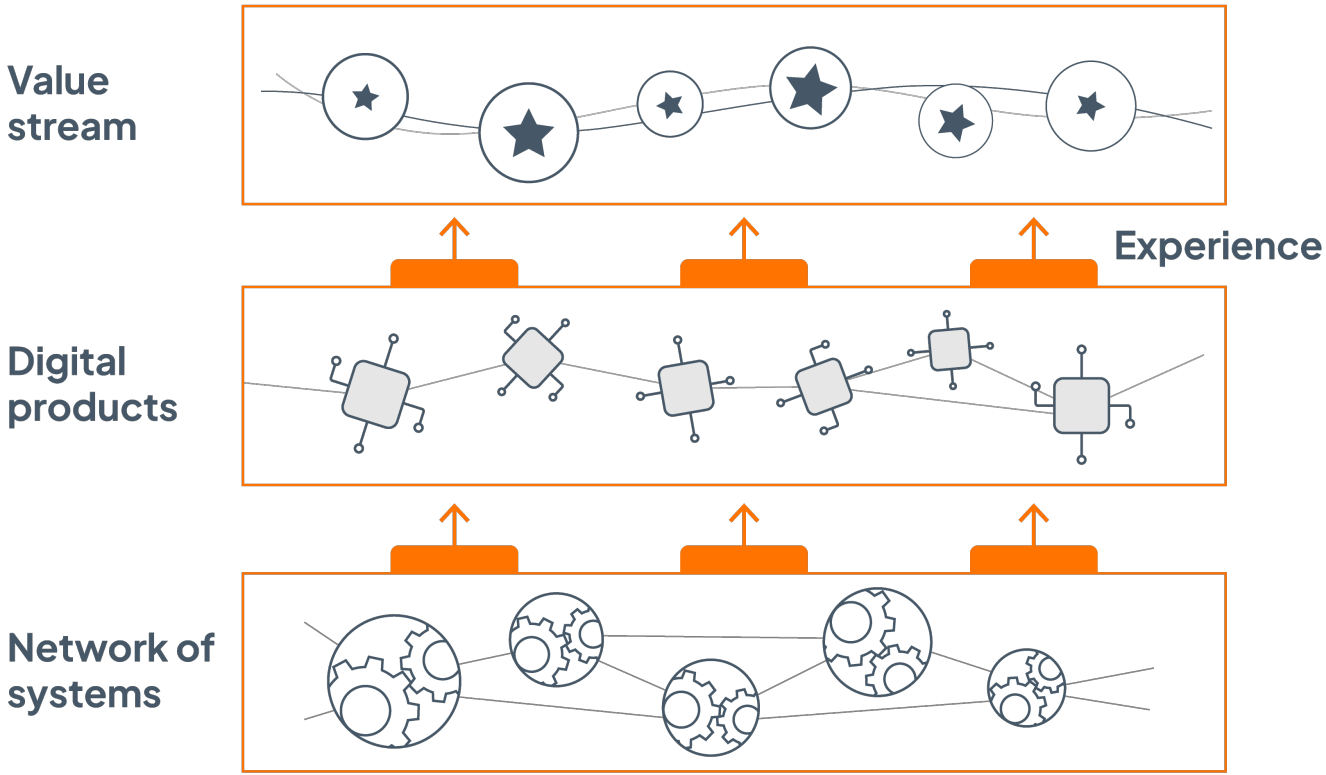




Photo by Isabel Galvez on Unsplash

Advancing beyond platformless

Build / buy platformless

Technology for your digital platform



API Management



Integration



Identity & Access Management

Run it yourself, private cloud or SaaS

Go platformless



Internal Developer Platform

Just add developers

Communities thrive where expertise meets contribution

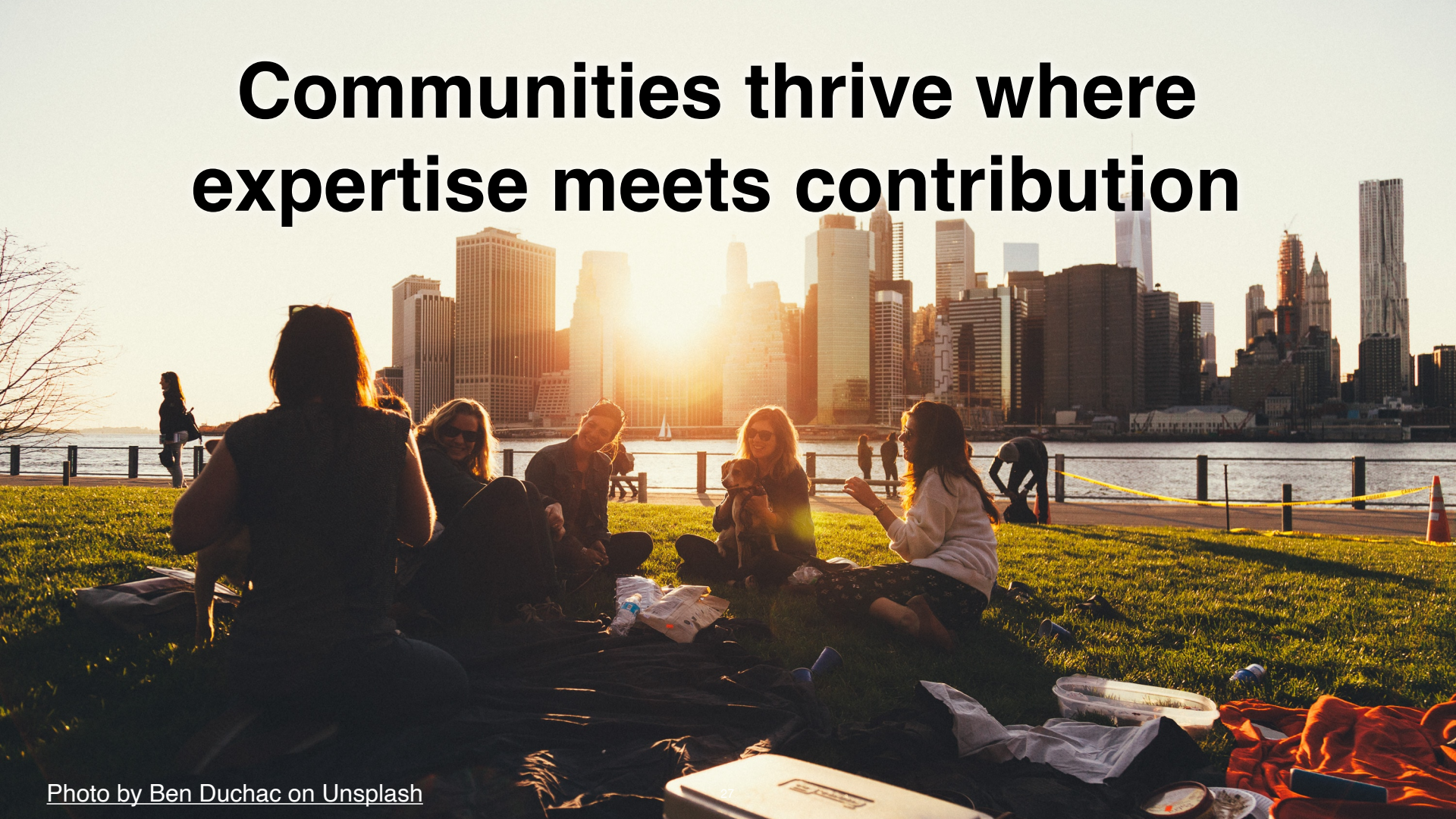


Photo by Ben Duchac on Unsplash

Discovering the Architecture Middle Path



Sanjiva Weerawarana
CEO

Asanka Abeysinghe
CTO

WSO2



EP1: Abstracting Away the Problem

WS02 • 538 views • 10 months ago



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0:08 / 39:05

Collaboration



- Architecture exchange
- Meetups
- Internal TedEx
- Advisory

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“There is no endgame; we are in an infinite game”

- Sanjiva Weerawarana

