Cut+Dry

WSO2CON 2024

Open Source to SaaS

Shanil Fernando

9th May 2024

Items to Cover

- The Cut+Dry Challenge
- The Vision for a Universal Integration Hub
- The Journey from Open Source to SaaS
- The State of Open Source today
- The Evolution of SaaS and where is it heading?
- When to use SaaS Vs Open Source
- 2 personal case studies

Main Constituents of the Foodservice Industry

Total Market Size ~US$ 2 Trillion

Operators/restaurants
1 Million



Distribution partners
15K | US$ 320bn



Sysco
Gordon FOOD SERVICE
US FOODS

Manufacturers
25K



Nestlé
Unilever
Johnson & Johnson



Tech Adoption

Main Constituents of the Foodservice Industry

Total Market Size ~US$ 2 Trillion

Operators

Manufacturers



We are building the Operating System for the Food service Industry

Distributors

What is Cut+Dry?

The **Most Experienced** Tech Team in the Foodservice Industry

- **75+ years of collective experience** among the leadership team.
- This is the same team that **modernized** Sysco, the largest Foodservice distributor in the world, from an analog business to the industry's digital leader.
- **Repeat founders** with multiple success in food service



Mani Kulasooriya
CEO



Jim O'Connor
COO



Kevin Wu
SVP of Product



Chuck Ellis
Chief Data Scientist



Shanil Fernando
Chief Technology and AI Officer



USA & Canada/Distributed



Colombo, Sri Lanka

CAKE ★
First Cloud POS for Restaurants
$70M in ARR

buzztable
Waitlist and Reservations
250M Diners Seated

FOODSERVICE ANALYTICS INC. ★
10+ Years of Data Science
Over 1M Foodservice Products Attributed

SyscoLABS
1000+ person organization
Over $30B in volume

★ Acquired by Sysco

The Challenge at Hand

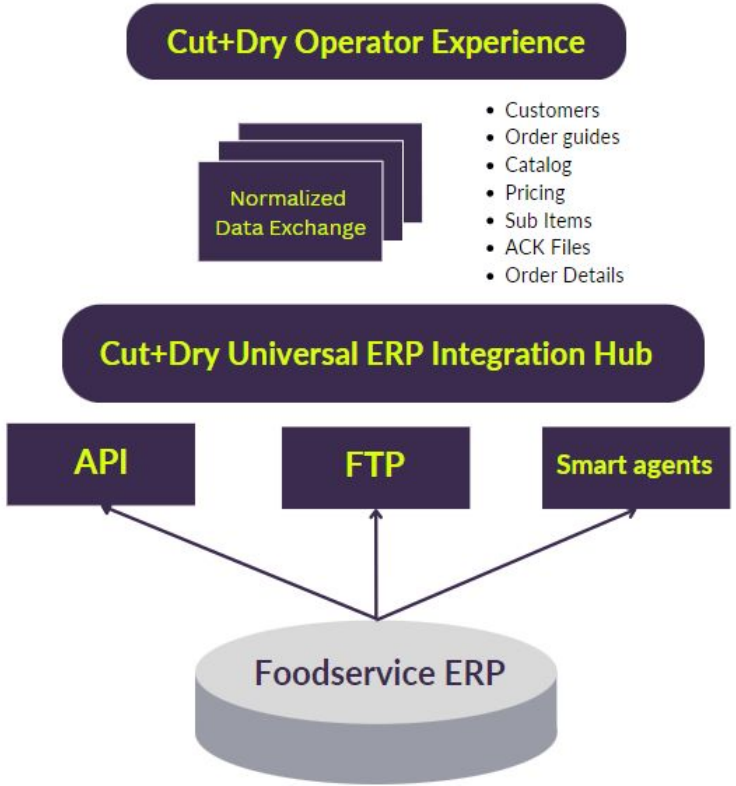
- **Integration with over 1000+ different ERPs**
- **1 Million Daily Transactions** - Efficiently process high transaction volumes while maintaining speed and accuracy.
- **Real-time** - Ensure instant updates and synchronization across the system.
- **Fault Tolerance & Scalability** - Robust fault tolerance mechanisms to handle errors and disruptions gracefully.

  Ensure scalability to accommodate growing user demands without compromising performance or reliability.



The Vision for a World Class Integration Hub

- High Uptime, highly scalable
- Fault tolerant
- Real-time monitoring with alerts for failures
- Ease and speed to integrate new customers
- Low code development for new integrations
- Ability to integrate with any ERP



How We Started

- **Existing Integration complexity**
  - Multiple integrations per distributor (Customers, Catalog, Order Guides, Invoices, Order Submit, Order ACK, etc)
  - > 100 DP integrations
  - Various integration types
    - File based, Multiple ERPs, APIs, Scraper, etc

- **Started with writing custom integration modules**
  - Limited scalability - Every new integration required significant development effort and resource allocation
  - Complex maintenance - Existing integrations need to run smooth while adding new integrations
  - Lack of centralized control - It was challenging to maintain visibility and control over all integration processes

- **Implemented OS micro integrator**
  - Some out-of-the-box functionality
  - Need a lot of tech knowledge

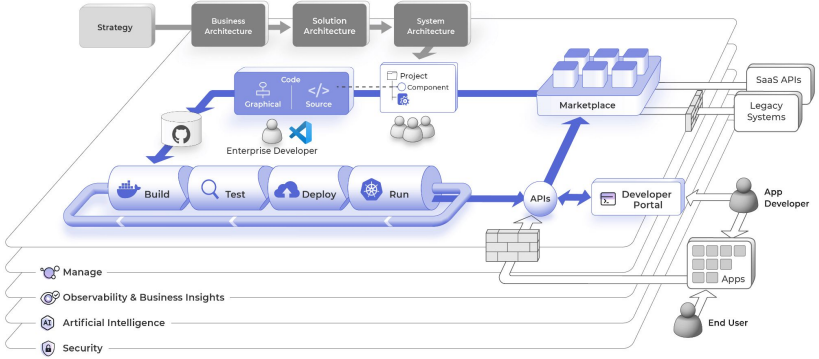
What Choreo offered and initial POC

- **Key advantages**
  - Productivity and Flexibility - Re-usable integration components made it easy to configure,improve, scale and monitor
  - Cloud-Native Scalability - Run on top of our existing cloud provider
  - Faster Time to Market - By accelerating the integration process we could add DPs faster and gaining a competitive edge and capturing market opportunities

- **Items we go out of the box (monitoring, orchestration, scheduling)**
  - DevOps and CI/CD Integration
  - Security and Compliance
  - Monitoring and Analytics

- **Current state**
  - Integration components are ready to configure for new DP integrations
  - Testing with existing DP integrations

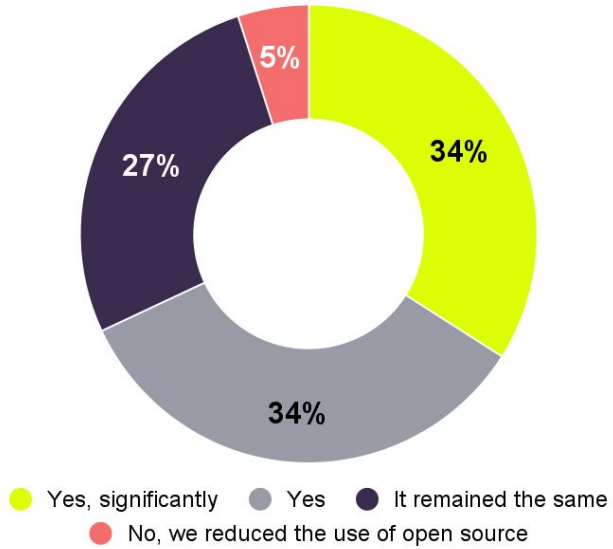
- **Time to build POC**
  - Built our integration components in few weeks
  - No time to deploy and run them on both staging
  - and production environments



The State of Open Source Today

95% of respondents said their organizations either increased or maintained their use of open source software in the past year

Has your organization increased the use of Open Source Software over the last year?



Source: 2024 State of Open Source Report, OpenLogic

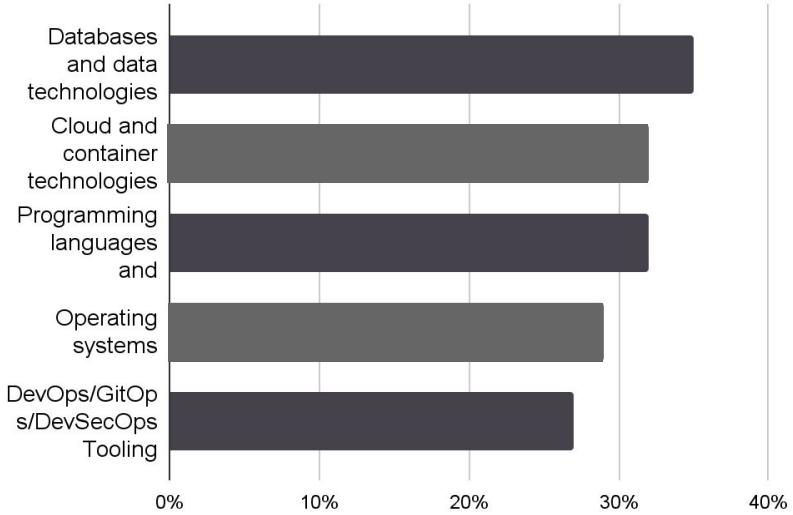
Top 5 reasons for using Open Source Software (OSS)	
1	No License Cost, Overall Cost Reduction (37%)
2	Functionality Available to Improve Development Velocity (31%)
3	Stable Technology with Community Long-Term Support (28%)
4	Access to Innovations and Latest Technologies (27%)
5	To Reduce Vendor Lock-In (21%)

Cut+Dry

The State of Open Source Today

Organizations are investing the *most* in databases and data technologies

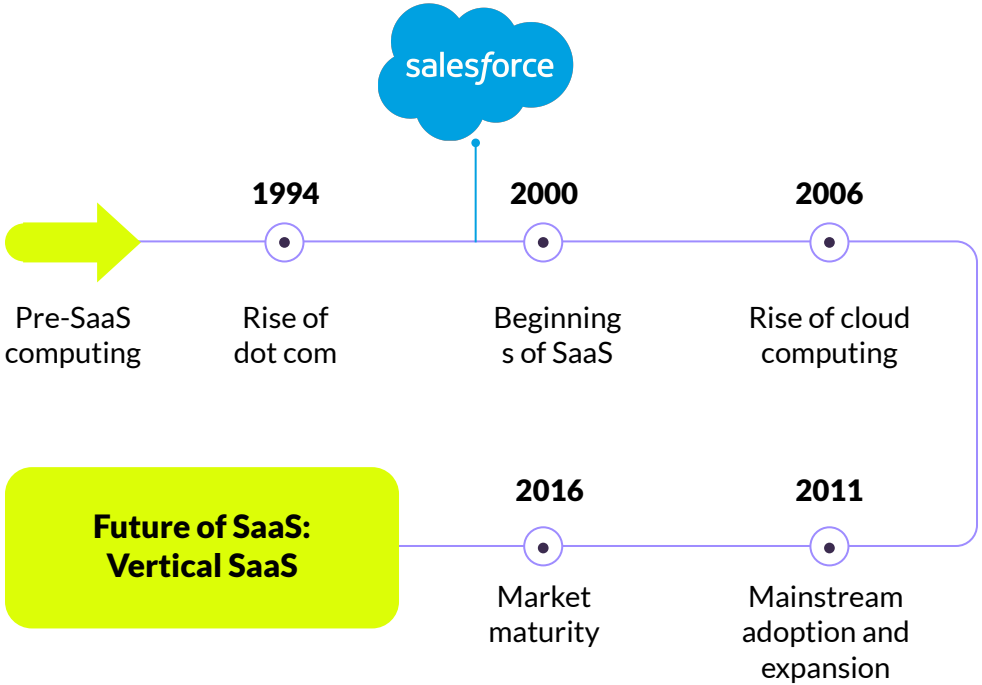
Which categories of OSS has your organization invested most in terms of projects, budgets and resources?

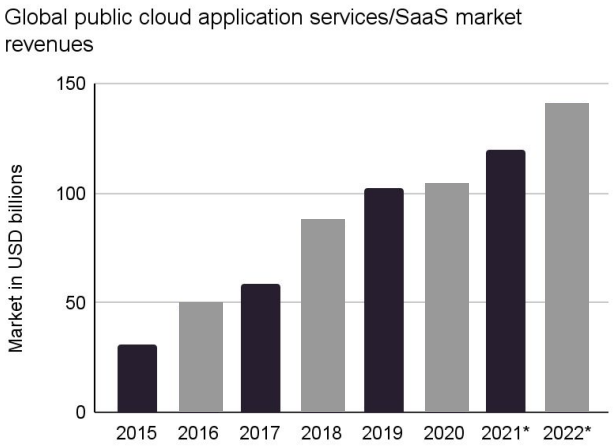


Top challenges with using OSS	
79%	Maintaining security policies or compliance
42%	Maintaining end-of-life versions of OSS
40%	Lack of high-level technical support
40%	Keeping up with updates and patches
38%	Lack of team's OSS skills, experience and proficiency
34%	Issues with installations, upgrades and configurations

Source: 2024 State of Open Source Report, OpenLogic

The Evolution of SaaS and Where is it Heading?





The **global SaaS market is expected to grow from $197 in 2023 to $819.23 billion by 2030,** with the North American SaaS market, which represented 44% of the global market share in 2022

Source: Statista

The Low Pricing of SaaS is Reducing the Cost Advantage of OS

Why is the TCO SaaS going down?

- Past much more costly to build, deploy and support
- Cloud computing has made it much easier to single deploy and maintain cheaply
- Much larger market access reduce unit cost

Cut+Dry

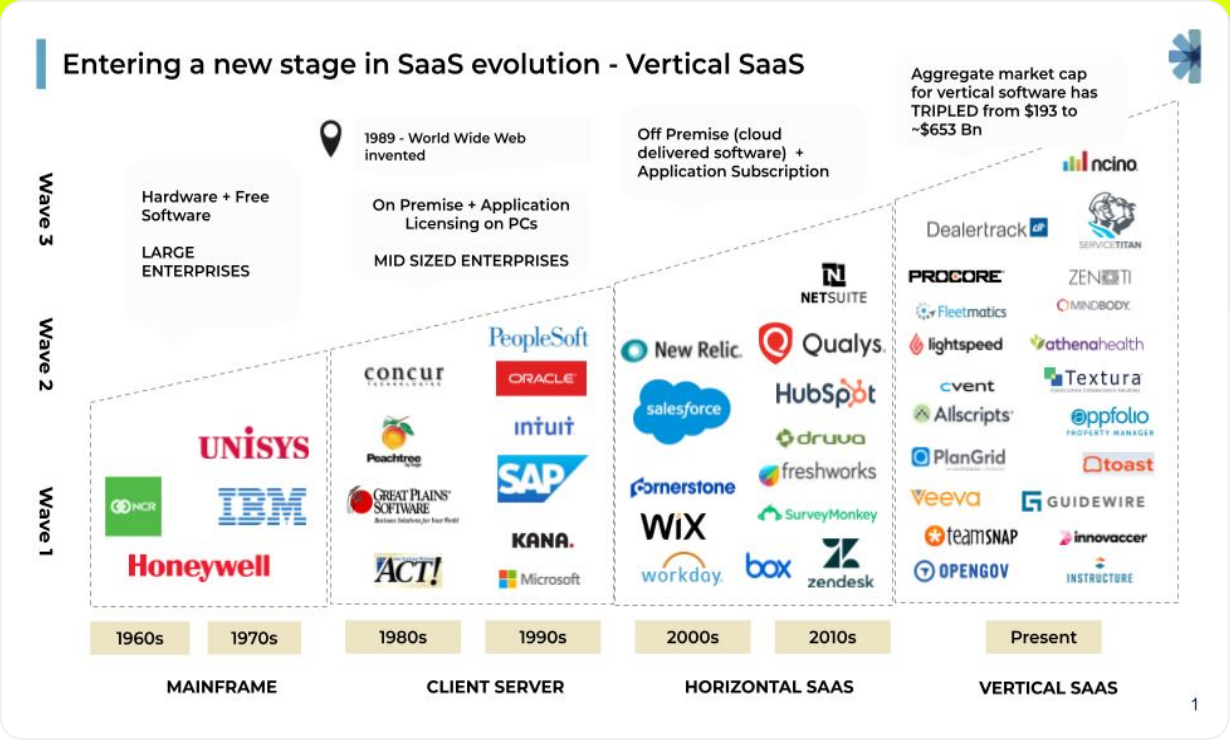
Horizontal and Vertical SaaS

VERTICAL SAAS IS THE **FUTURE**

Horizontal SaaS	Vertical SaaS
Common solution for various industries	Complete solution for specific industry
Target a wide audience	Target a specific audience
Provide little customization	Provide advanced customization
Microsoft slack Alphabet ORACLE zoom	shopify toast

Source: [The History of SaaS: From Emerging Technology to Ubiquity by Victoria Fryer]

Vertical SaaS



Source: [Vertical SaaS - An Opportunity for Indian founders whose time has come by Anirvan Chowdhury]

Cut+Dry

When to Use SaaS and When to Use OS

	Open source	SaaS
Speed of development		✓
Initial cost		✓
On-going cost		✓
Ownership of IP	✓	
Technology skill		✓
Domain		✓
Vendor dependance	✓	
Flexibility	✓	
Security		✓
Scalability		✓

Was not the case in the past

Case Study 1 – Openbravo based POS solution

- **Startup Company**
- **Advance Cloud based POS for restaurants**
- **Wanted to build functionality fast, lot of complex business logic in restaurants**

Pros

- Got customer adoption early. Was able to prove the case
- Lot of prebuilt functionality

Cons

- Needed deep tech knowledgeable team
- Additional feature development became harder
- Mistake to build core competency on an OS solution
- Investor concerns



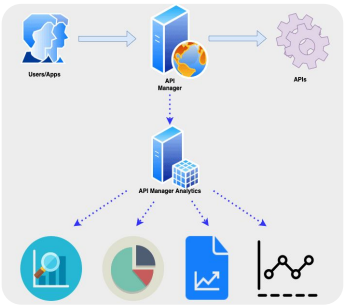
Key learning - Your core product or Competency, you should not use OS

Cut+Dry

Case Study 2 – API manager for Fortune 100 company

- **Fortune 100 company**
- **Needed to support and orchestrate large number of both internal and external API**
- **High volume transactions**
  - ~1000 transactions per second
  - Millisecond latency





Pros

- Ownership of end to end solution/IP and Code
- Supported the use case

Cons

- Needed large deep tech knowledgeable team
- Cost related to large team and management of the infrastructure
- Security vulnerabilities and concerns

The solution was appropriate for the problem at hand, eventually migrated the a SaaS based solution as the TCO of that was better than running and maintaining a large engineering team

Cut+Dry

Summary

If you really want to own your software and get off the ground with functionality OS

Cost advantage of of OS is diminishing and future is SaaS

Vertical SaaS companies will be prominent in the next decade