DataPorts

Your Pathway to **Content Integration**

Installation Guide

Introduction

We live in a world that produces role-specific data models and where success is based on being efficiently able to embrace the rich diversity of standards. The Consumer Goods Forum (CGF) has previously undertaken work to answer a single critical question: **Is there a durable way in which we can design and build an open-source technical framework for peer-to-peer content integration for value chain partners, in full support of current and future industry and open standards?**[1]

In investigating this question, it was found that, in most cases, there remains data which does not fit the model. The CGF has been asked to find a more general way to share information such that partners can choose when and where to apply standards, adapting dynamically to changing needs.

This document serves to provide a detailed outline of **DataPorts**, the Role-Specific Data Model, and Intelligent Value Networks, as well as provide step-by-step guidelines for implementation and support going forward. It aims to provide a consolidated pathway to content integration for consumer goods companies globally, while presenting additional resources for further support.

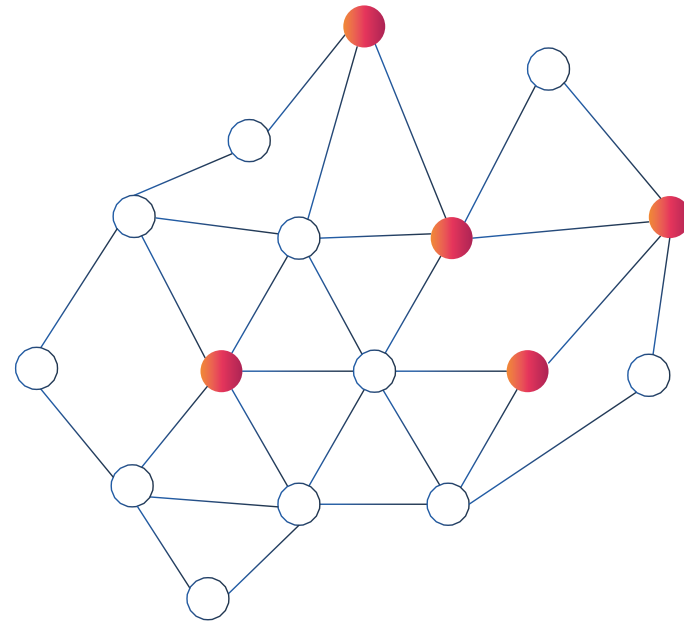**Source: Chris Hunt, Intel: "DataPorts: E2E Content Integration"**

Building Blocks

Role-Specific Data Model

Dynamic diversity will always outperform static unification.

This refers to the idea of creating a limited data model which fits the needs of communicating only the relevant information needed to support a specific task or tasks.

Role-Specific Data Models adapt perfectly into their respective environment and business relationship. DataPorts fulfill the task of connecting the diverse dots and innovative data models that businesses and sectors will create, test, implement, maintain and improve over time.
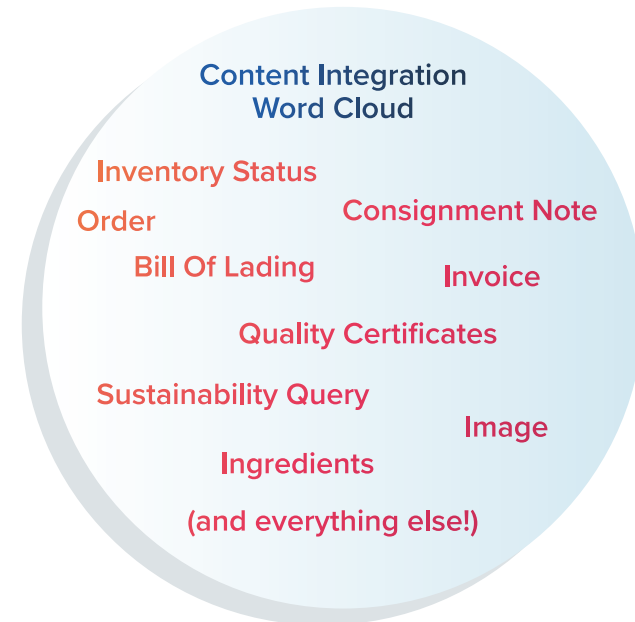
Building Blocks

DataPorts

These are data virtualisation servers which share role-specific data schemas and enable Content Integration.

They work by virtualising the participant data sources, optimising queries, transforming query results inline, and creating an aggregate query response.

Enable autonomous **Machine-to-Machine** (M2M) communication and process integration that take decisions using AI/ML in **Real Time**: Always provide your systems with the freshest data - where and when you need it.

Stored data gets stale fast. **Avoid data duplication**, make data available at source - avoid creating intermediate central hubs with fast deprecating data quality over time suffering from data maintenance bullwhip effects.

Content Integration Word Cloud

Inventory Status
Order
Consignment Note
Bill Of Lading
Invoice
Quality Certificates
Sustainability Query
Image
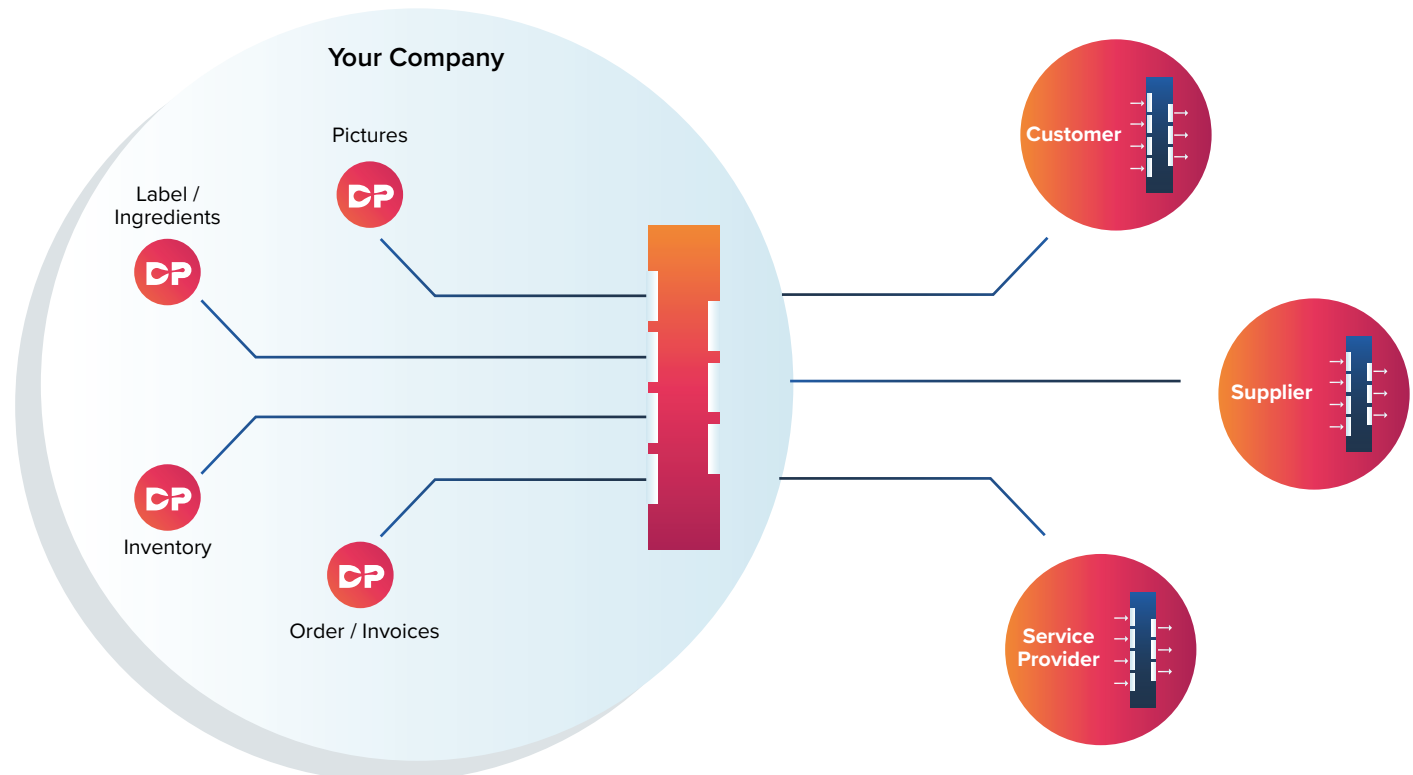Ingredients
(and everything else!)

DataPorts: Outbound - Inbound - Peer-to-Peer

DataPorts are specialised web servers which make **peer-to-peer content integration** transparent. No matter where data sources actually reside, DataPorts make data sources accessible together, through a single, common programming model.

They neutralise the differences in location, programming interfaces and formats, to allow content integration to be **automated** efficiently.

Automation glues together event-driven processes and micro-services into **intelligent value networks**.
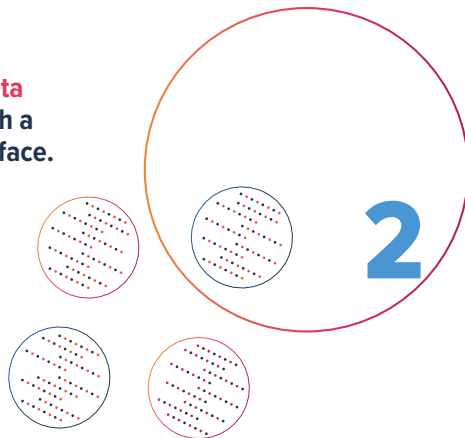
Intelligent Value Networks

Intelligent Value Networks allow consumer products and retail companies to reinvent their value chains as modern value networks, characterised by speed and intelligence, to meet the demands of today's connected consumers.

Role-Specific Data Model: Abstract - Transform - Compose
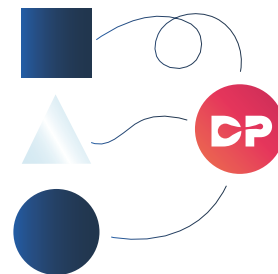
1 **Access any data source through a common interface.**

2 **Perform operations on data retrieved from the different sources.**

3 **Combine the query result components from each source into a single response.**

4 **We have chosen GraphQL for simplicity and completeness in terms of expressing queries and in handling abstraction, transformation, and composition.**

By using GraphQL as the engine for data virtualisation we have been able to quickly build working DataPorts using well supported, off-the-shelf open source libraries. Complex DataPort queries written intuitively in GraphQL and spanning multiple backend data sources are performance optimised with results returned fit for purpose according to the chosen data model.
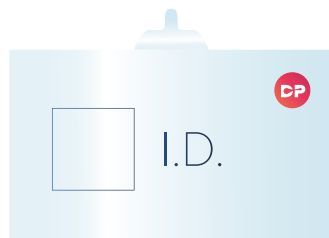
▶ **Describe your data the way you want.**

▶ **Ask for what you want, knowing what is offered.**

▶ **Get predictable results and transform them into something useful for you.**
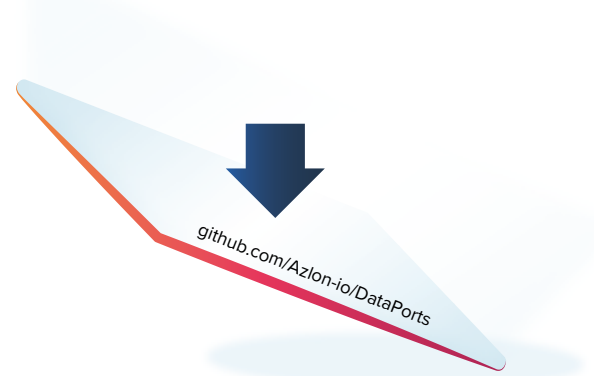
Getting Started: First Steps

Among various implementation options, we propose to start by using the **Azlon implementation** developed for the **CGF** with support from **Capgemini** and **SyncForce**.

1 **Get your DataPort ID:**
https://dataports.io/signUp

I.D.

2 **Get the open source software:**
https://github.com/Azlon-io/DataPorts

github.com/Azlon-io/DataPorts

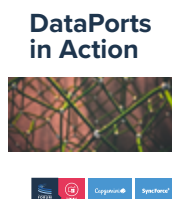**3** **Start using the example application as described on GitHub**

Moving Forward: You Are Ready, Now What?

Now that you are equipped following our implementation proposal, please contact Rudy Hagedorn, the CGF's End-to-End Value Chain Director, to receive the list of participating dataport trials. You can also forward the document to your suppliers and customers.

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Need More Support? Additional Resources

1. DataPorts – Solving End-to-End Value Chain Content Integration: CGF & Chris Hunt, Intel

2. DataPorts in Action: CGF & Kees Jacobs, Capgemini & Hans de Gier, SyncForce

3. Future Value Chain: CGF & Capgemini

About The Consumer Goods Forum

The Consumer Goods Forum ("CGF") is a global, parity-based industry network that is driven by its members to encourage the global adoption of practices and standards that serves the consumer goods industry worldwide.

It brings together the CEOs and senior management of some 400 retailers, manufacturers, service providers, and other stakeholders across 70 countries, and it reflects the diversity of the industry in geography, size, product category and format. Its member companies have combined sales of EUR 3.5 trillion and directly employ nearly 10 million people, with a further 90 million related jobs estimated along the value chain. It is governed by its Board of Directors, which comprises more than 55 manufacturer and retailer CEOs.

For more information, please visit: www.theconsumergoodsforum.com.