



**Hewlett Packard
Enterprise**


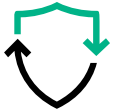

What is Composable Infrastructure, and Why Does It Matter?

Scott Wood, VP Solutions and Technology

May 10, 2017

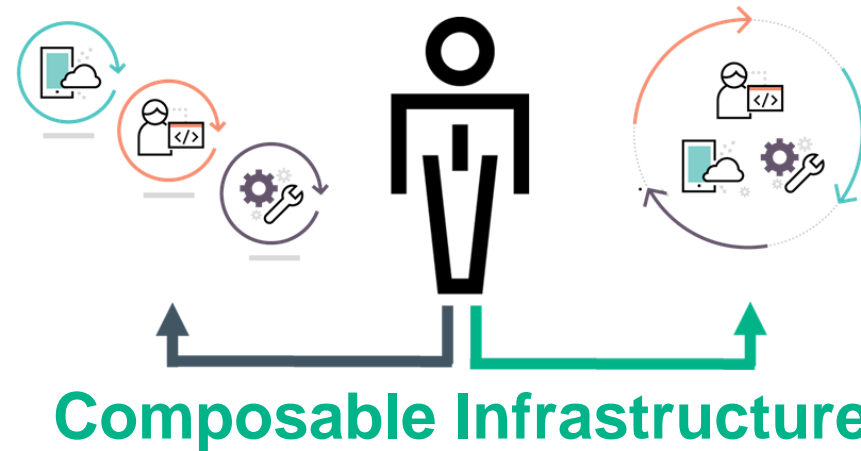


Point of View

- Composability is critical to the Software Defined Data Center
- Composability adds value to current and future infrastructures & frameworks
- Composability Business Value:
 -  **Speed** – Infrastructure when and how the business needs it (Button-Ready Infrastructure)
 -  **Lower Risk** – Technical debt elimination through automation
 -  **Lower Cost** – Right-sized infrastructure and improved asset utilization

Composable Infrastructure

Architectural design principles



Composable Infrastructure

Unified API

Software-Defined Intelligence

Fluid Resource Pools

Unified API

- Single line of code to abstract every element of infrastructure
- Full infrastructure programmability
- Bare metal interface for Infrastructure as a Service

Software-Defined Intelligence

- Template-driven workload composition
- Frictionless operations

Fluid Resource Pools

- Single infrastructure of disaggregated resource pools
- Physical, virtual, and containers
- Auto-integrating of resource capacity

Composable Infrastructure

Definition and analysts' view

A **composable infrastructure** is a framework whose physical compute, storage and network fabric resources are treated as services. In a **composable infrastructure**, resources are logically pooled so that administrators don't have to physically configure hardware to support a specific software application

searchitoperations.techtarget.com/definition/composable-infrastructure

FORRESTER

Composable Infrastructure: A Hardware Foundation For Extreme Service Agility

Cloud-Like Speed And Flexibility Finally Arrive At The Hardware Level

April 14, 2016

WHAT IT MEANS

Composable Infrastructure Brings The SDDC Closer To Reality

Gartner.

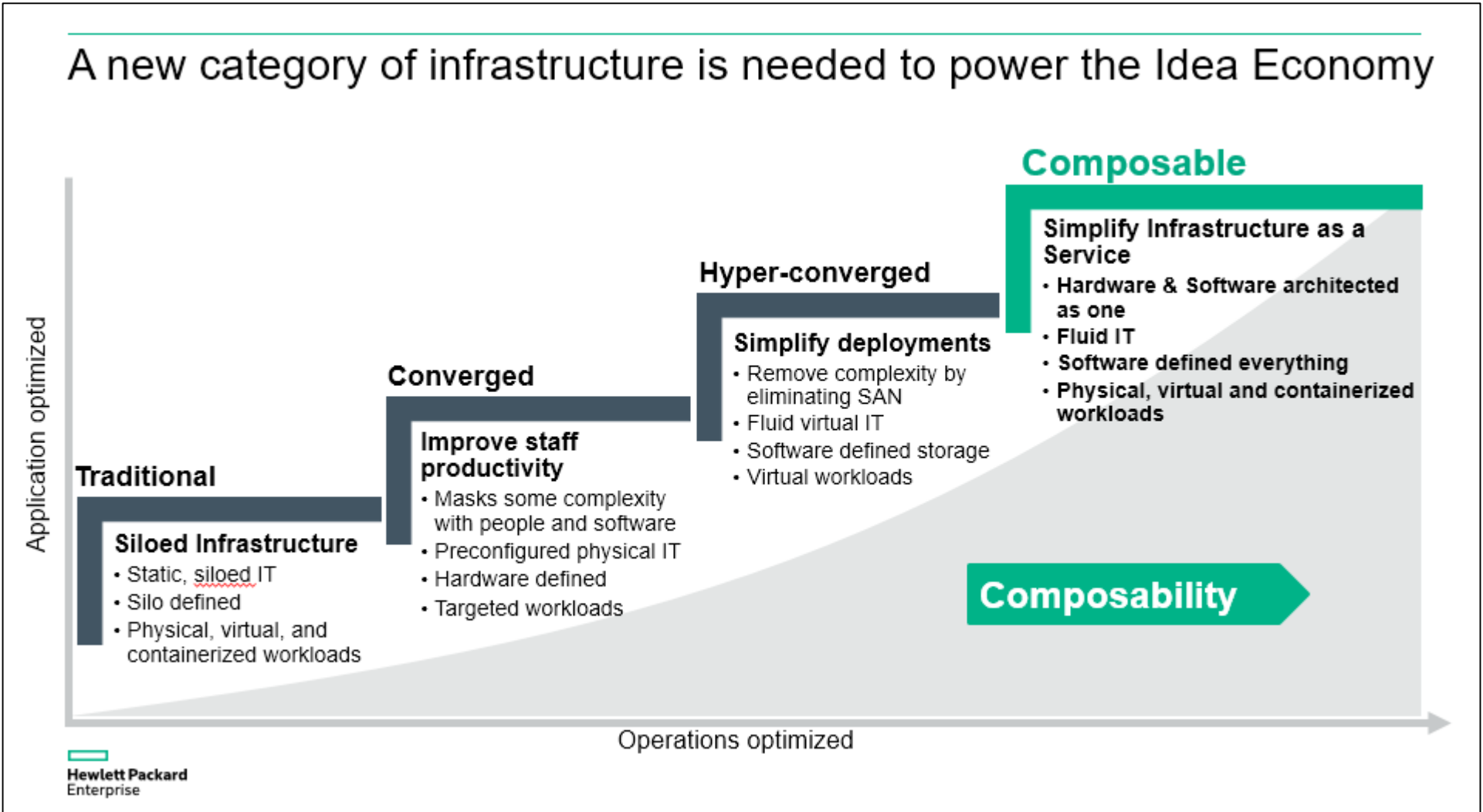
Composable Infrastructures Will Affect Hyperconvergence's Next Generation

Published: 13 May 2016 ID: G00305699

Composable infrastructures can significantly affect I&O leaders delivering next-generation applications, when rapid development and delivery mandate fast, continuous integration

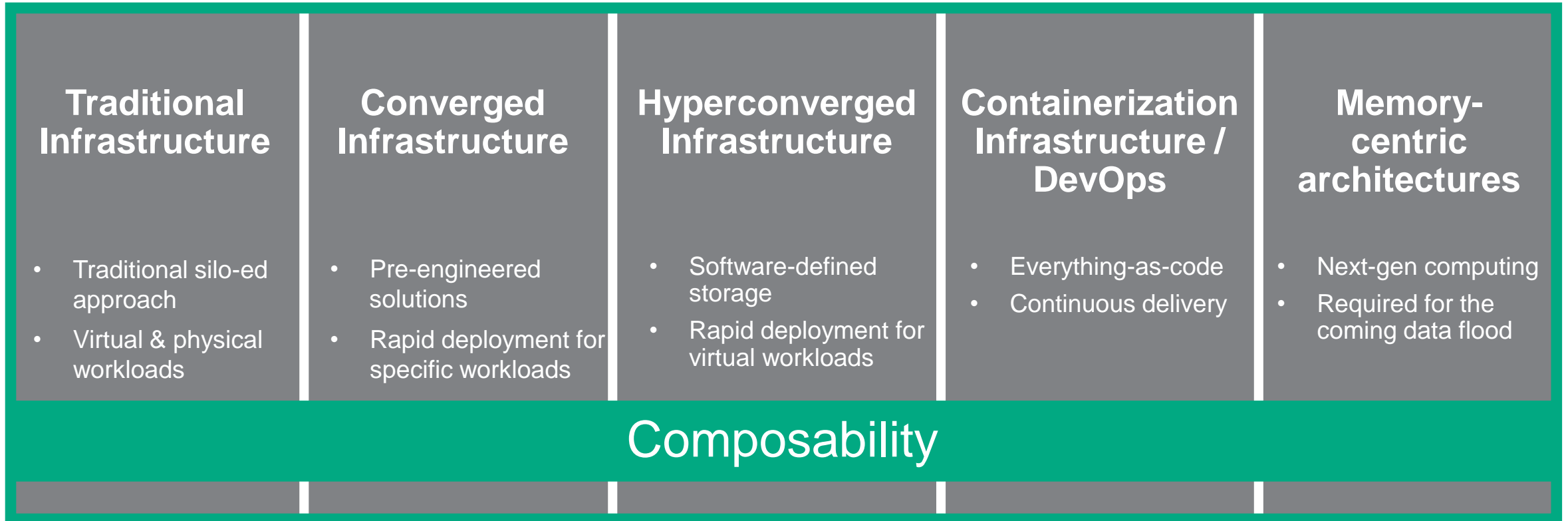
Positioning Composability

Vendors present Composability as a new Infrastructure CLASS



Positioning Composability

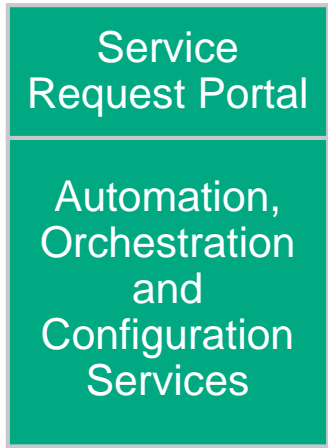
Over time, Composability is an important Infrastructure ATTRIBUTE ([Gartner.*](#))



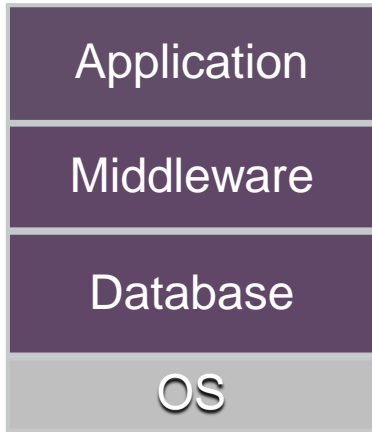
* Composable Infrastructures Will Affect Hyperconvergence's Next Generation ID: [G00305699](#)

Value of infrastructure composability in the enterprise

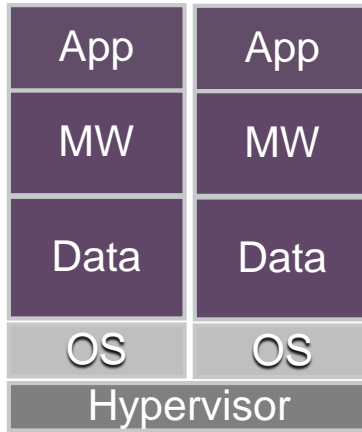
Cloud Management Platform



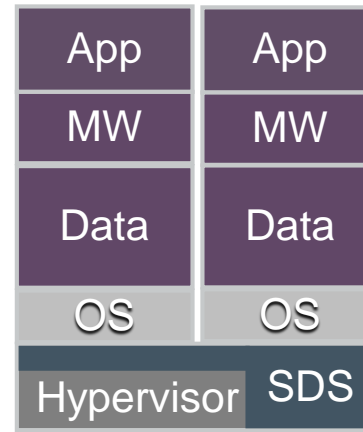
Traditional/DB bare metal



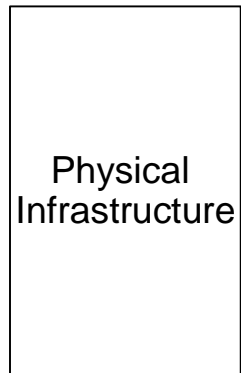
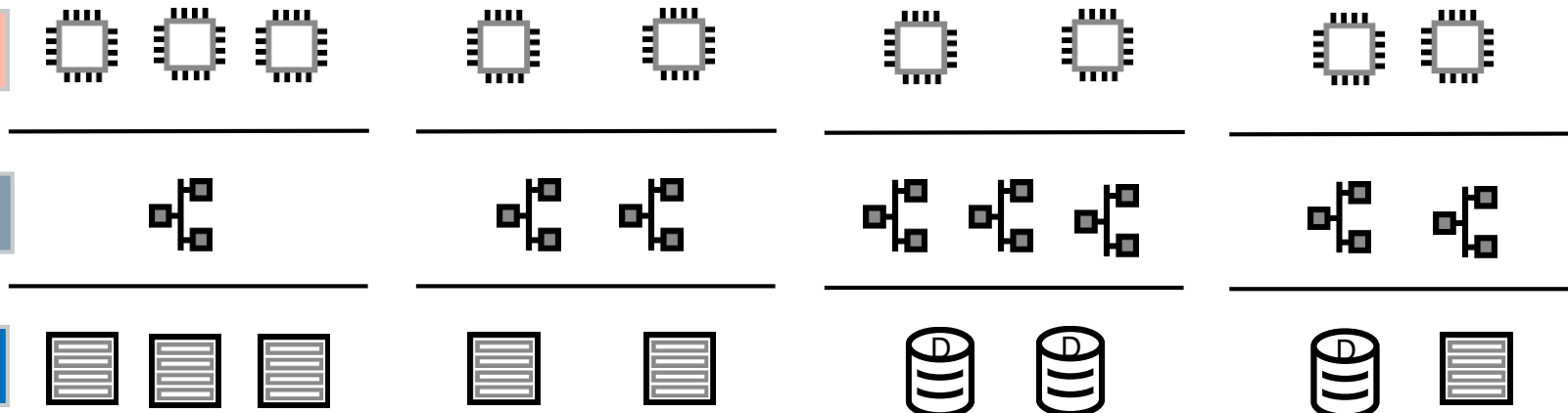
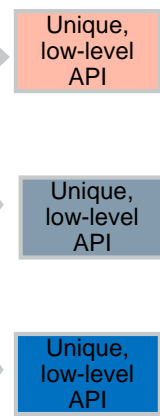
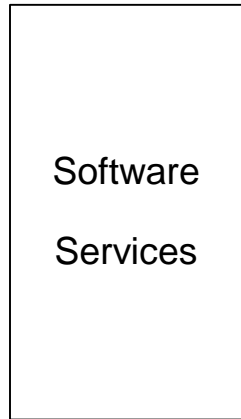
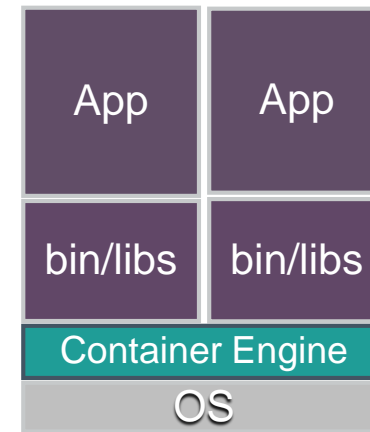
Virtualized / Converged



Hyperconverged



Containerized



Value of infrastructure composability in the enterprise

Cloud Management Platform

Service Request Portal

Automation, Orchestration and Configuration Services

Traditional/DB bare metal

Application

Middleware

Database

OS

Virtualization / Converged

App

MW

Data

OS

Hypervisor

Hyperconverged

App

MW

Data

OS

Hypervisor SDS

Containerized

App

bin/libs

Container Engine

OS

Unified API

Software Defined Intelligence

Fluid Resource Pools



Composable Infrastructure

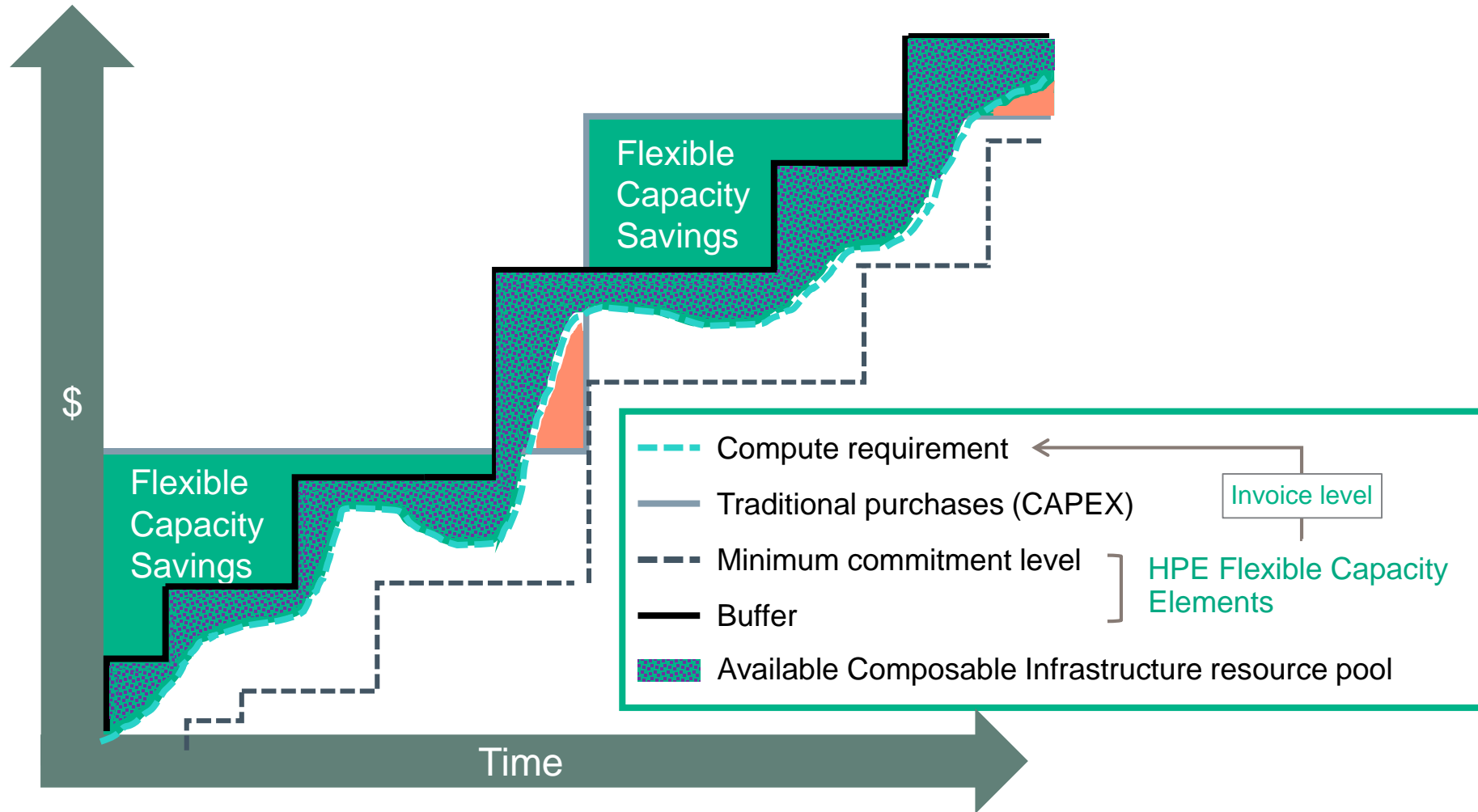
Software Services

Fully Automatable Application Delivery Stack

Physical Infrastructure

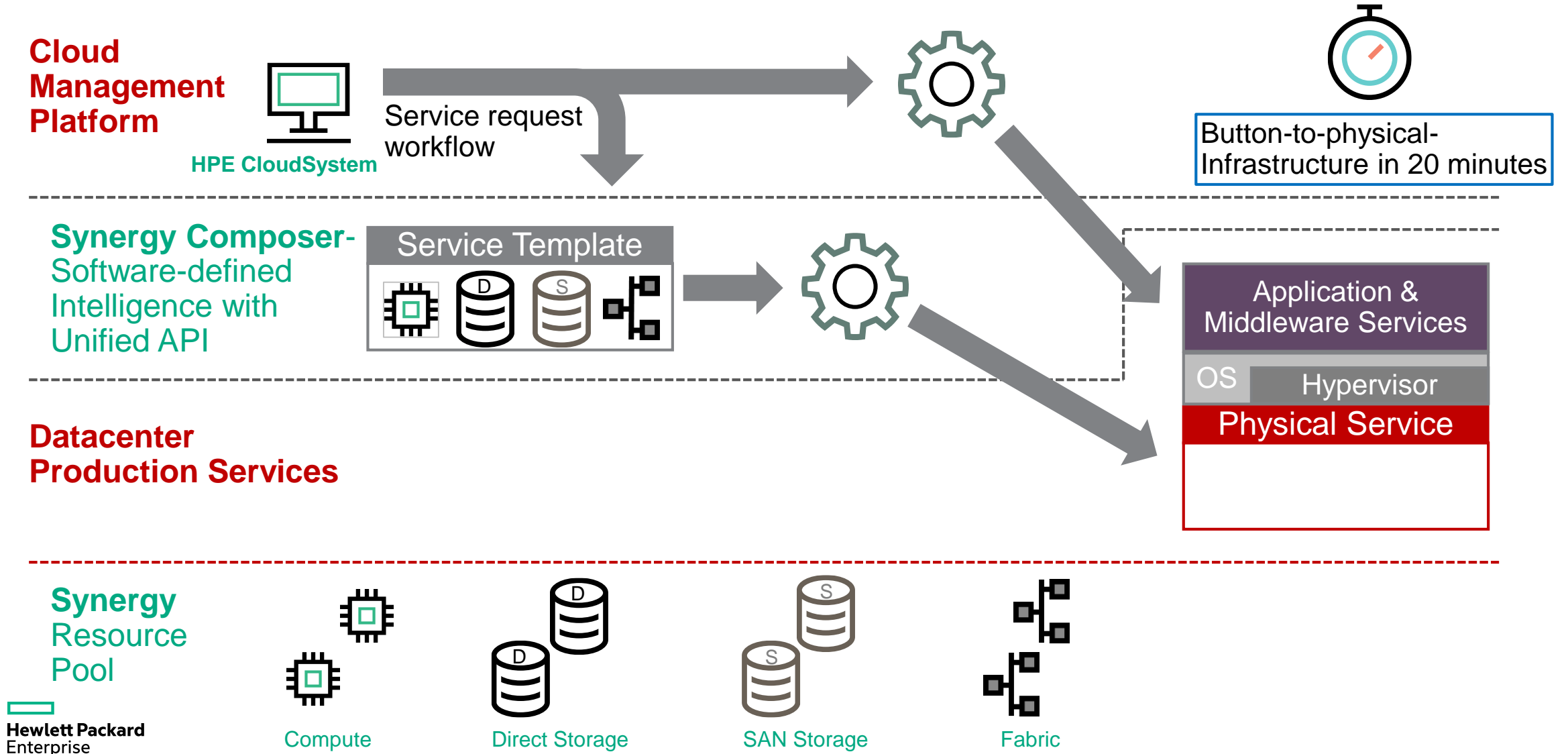
HPE Flexible Capacity - Composable IT as a Service

Public cloud economics with on-premise security, sovereignty and control



Use Case #1 – Create physical infrastructure from resource pool

Build a custom Compute, Storage & Network Service via software



Use Case #2 – Automate operational change

Manage firmware and other changes via software intelligence

IT Staff

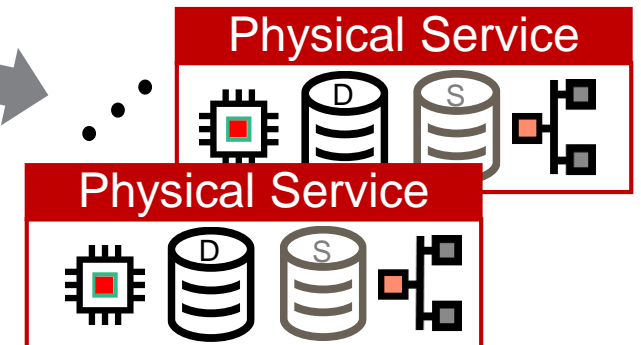
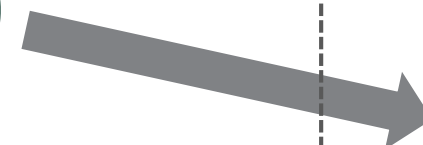
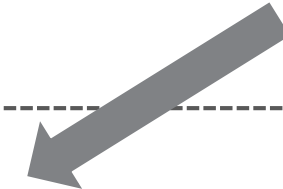
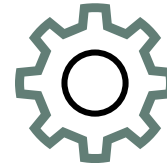
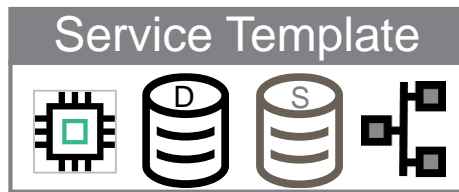


HPE Synergy
Composer Console

- New firmware recipe
- New VLAN

Apply the template to the
physical infrastructure
(via CMP, vCenter, script, etc.)

Synergy Composer-
Software-defined
Intelligence with
Unified API



**Datacenter
Production Services**

Lower risk and
reduce technical debt

**Synergy
Resource
Pool**



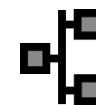
Compute



Direct Storage



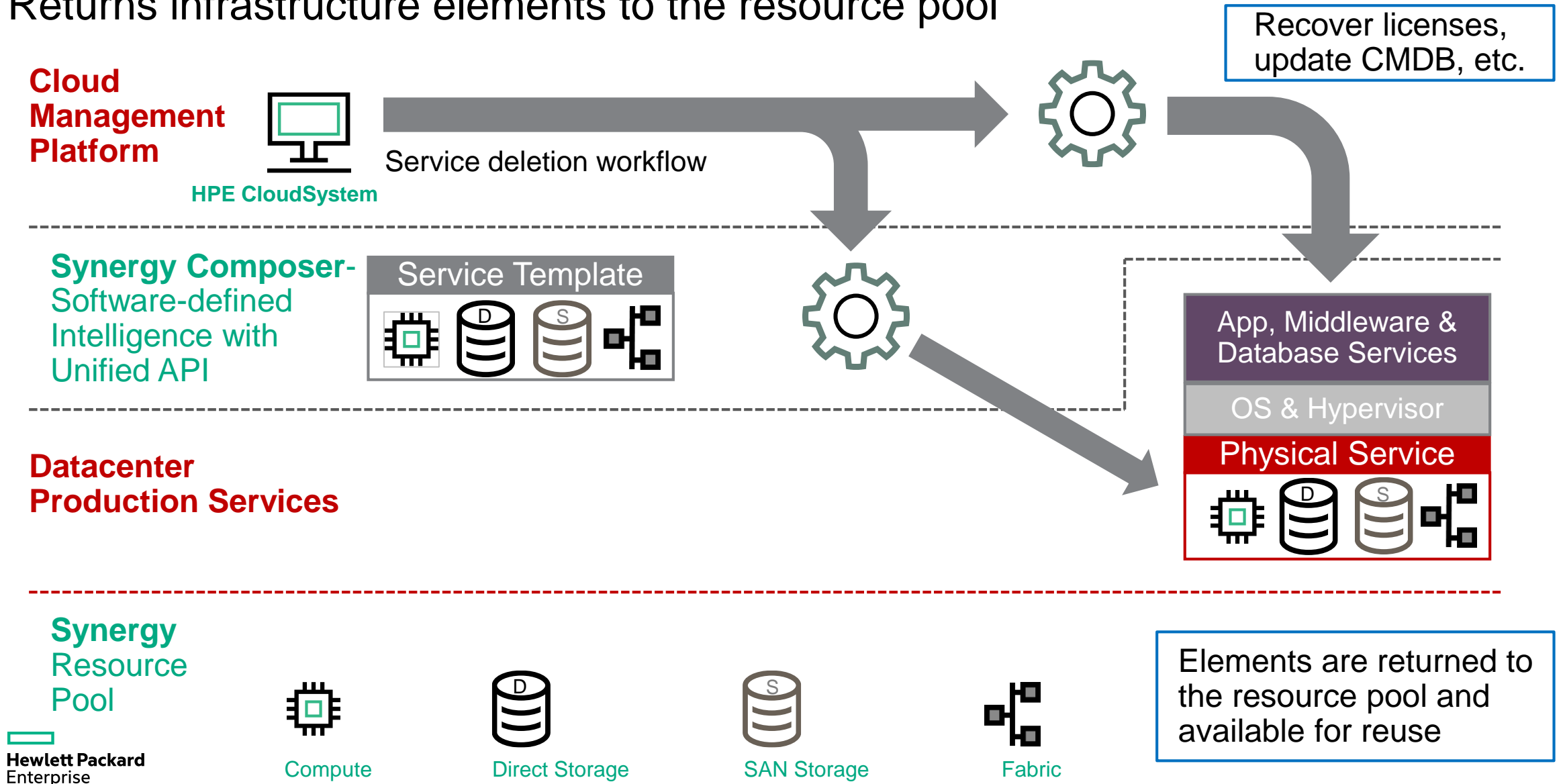
SAN Storage




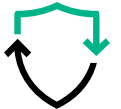

Fabric

Use Case #3 – Decommission service and infrastructure

Returns infrastructure elements to the resource pool



Point of View

- Composability is critical to the Software Defined Data Center
- Composability adds value to current and future infrastructures & frameworks
- Composability Business Value:
 -  **Speed** – Infrastructure when how the business needs it (Button-Ready Infrastructure)
 -  **Lower Risk** – Technical debt elimination through automation
 -  **Cost** – Right-sized infrastructure and improved asset utilization



Hewlett Packard
Enterprise

Thank you