

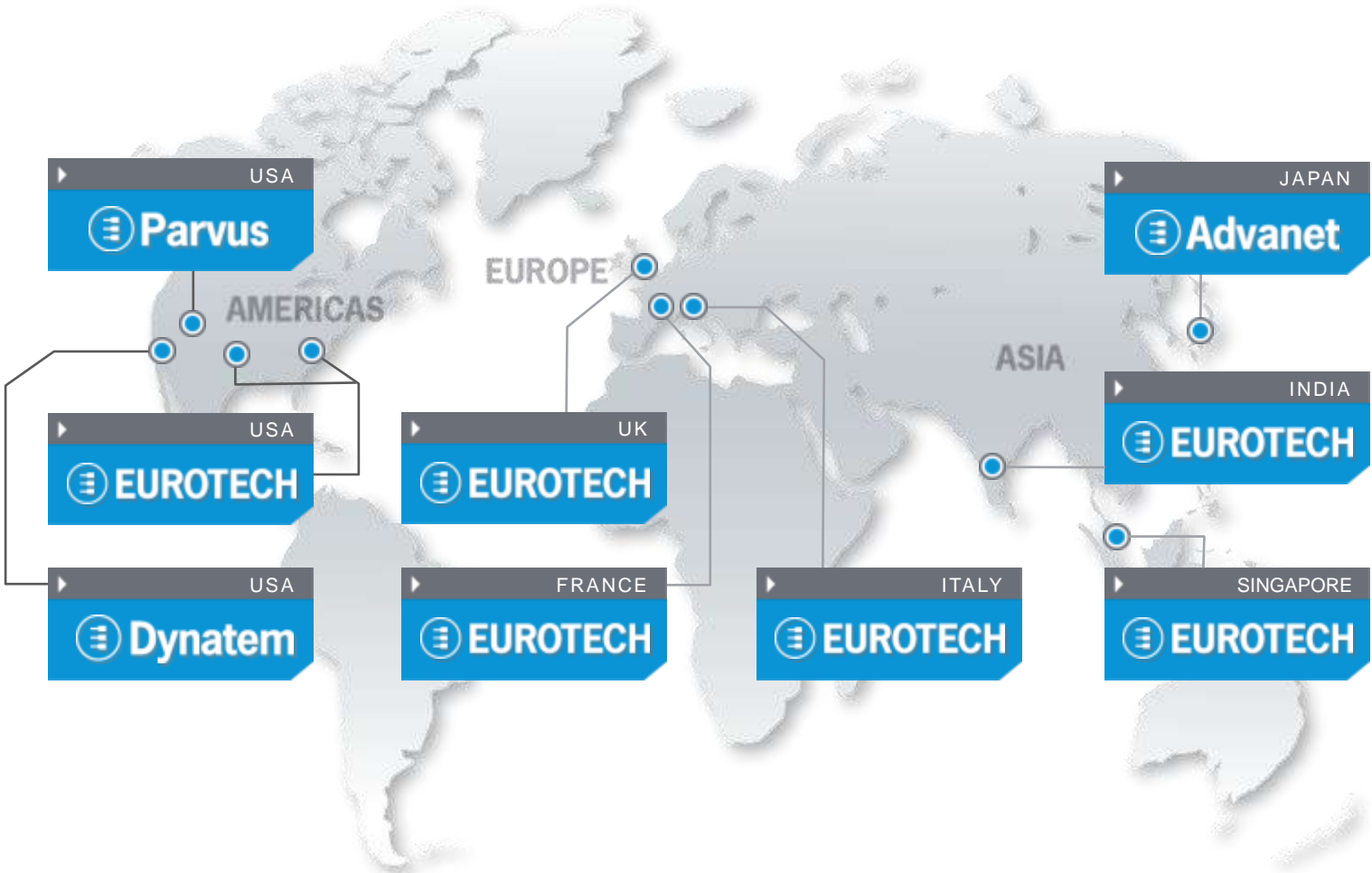
The Basic Architecture of successful M2M Solutions

Field-to-Cloud Technology Building Blocks for Internet of Things Applications

Eurotech's Essence

- Behind the products of more than 20 Global 500
- World top 10 player in the Embedded Computers market
- One of two European producers of High Performance Computers
- Public Company, in the STAR segment of Borsa Italiana
- Core competences: **Miniaturization & Interconnection of computing devices**
- **2 Strategic Business Units:**
 - NanoPC SBU: Pervasive Computing Devices & Device Data Management
 - HPC SBU: Green Petascale High Performance Computers

Group Global Footprint



Eurotech Product Portfolio

Boards & Modules



Boards & Modules



Devices & Systems



Value Add Software & Services



Vertical Application Solutions



OpenVPX & VME



CompactPCI & CompactPCI Express



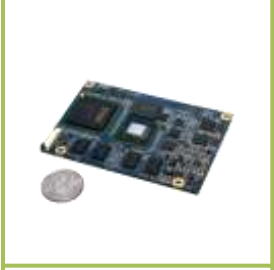
PC/104+



EPIC & EBX



COM Express & Small Form Factors



Catalyst & Other Form Factors

Eurotech Product Portfolio

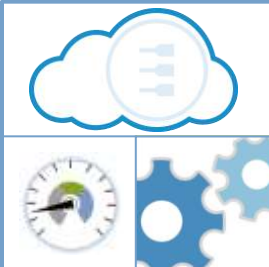
Devices & Systems



Boards & Modules



Devices & Systems



Value Add Software & Services



Vertical Application Solutions



Portable Mobile Devices



Mounted Mobile Devices



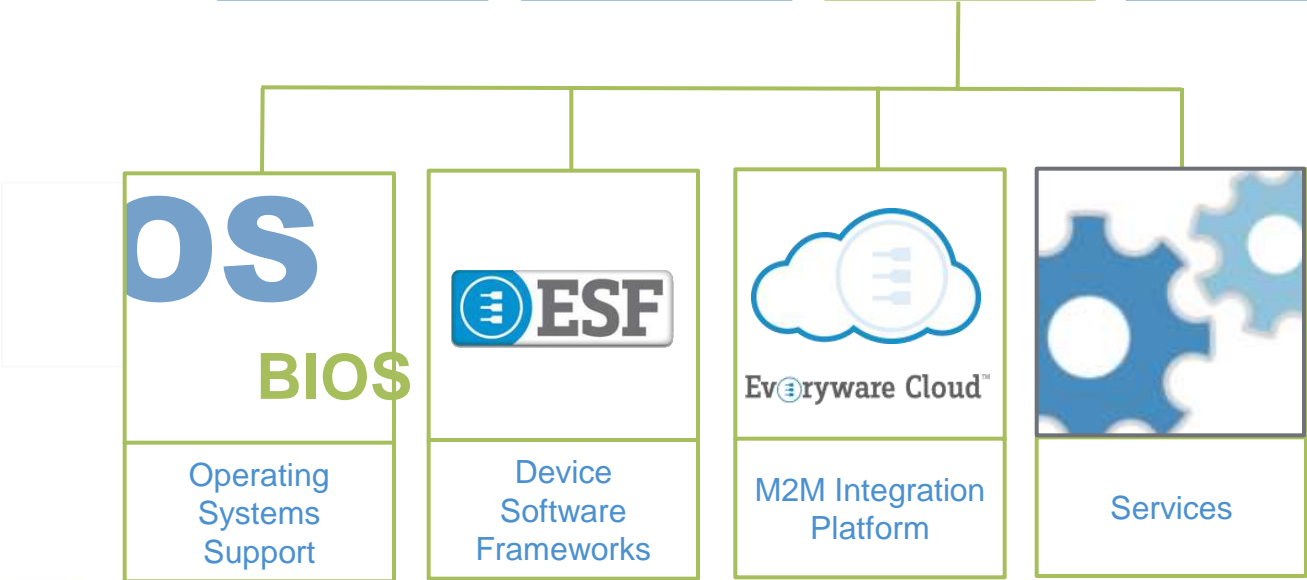
Stationary Devices



Modular Systems

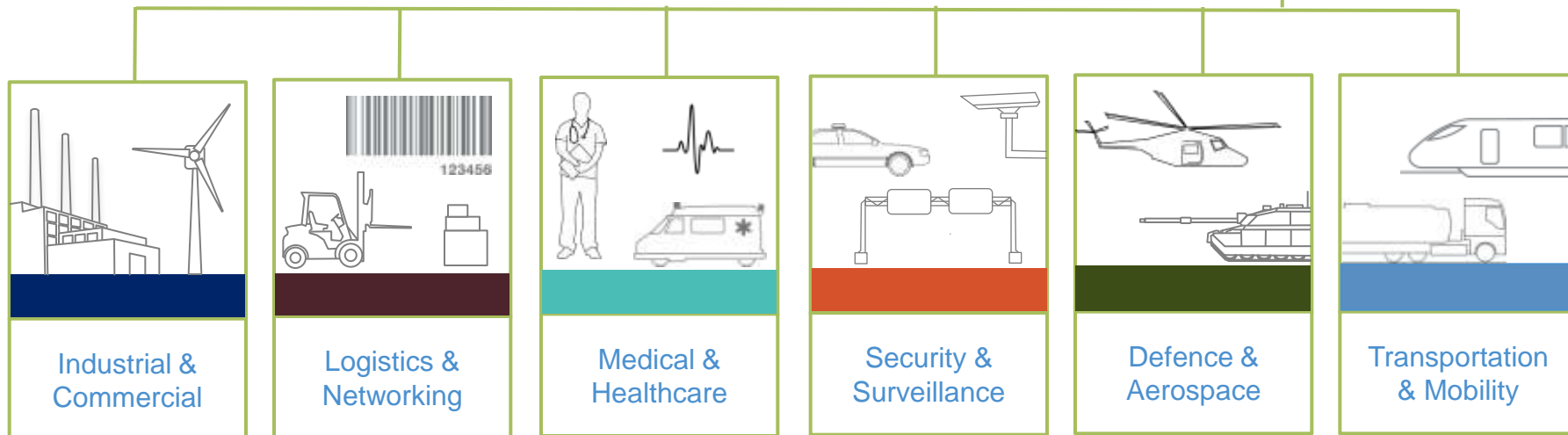
Eurotech Product Portfolio

Value Add Software & Services



Eurotech Product Portfolio

Integrated Vertical Solutions



Business Issue

Sometimes M2M Solutions look simple ...

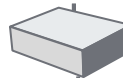
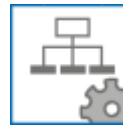
A single application
to communicate with

No connectivity
options required

Single or no special
application on gateway

Only one type of
Gateway HW & SW

Only one type of
device / sensor



**Business
Application**

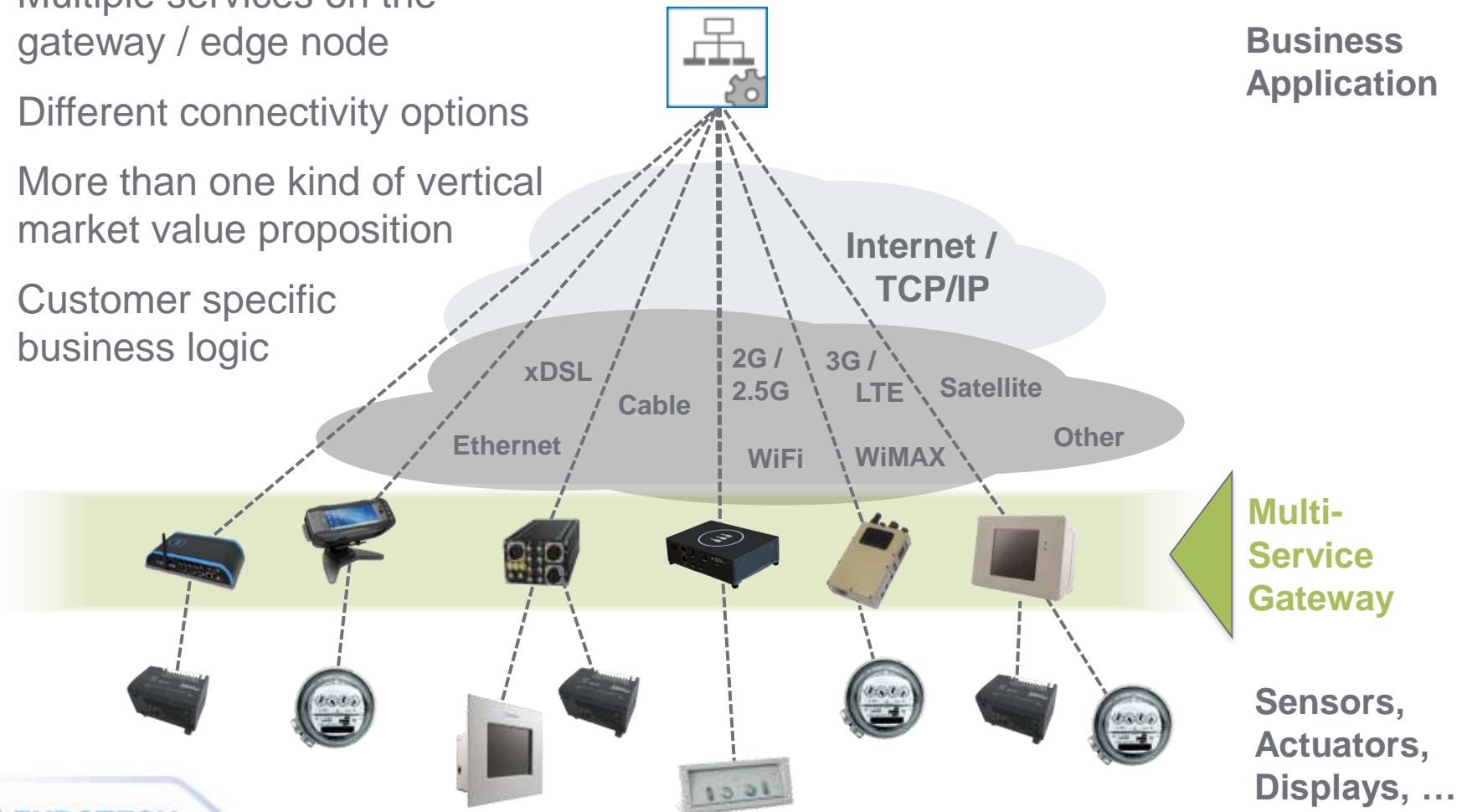
**Service
Gateway**

**Sensors,
Actuators,
Displays, ...**

Business Issue

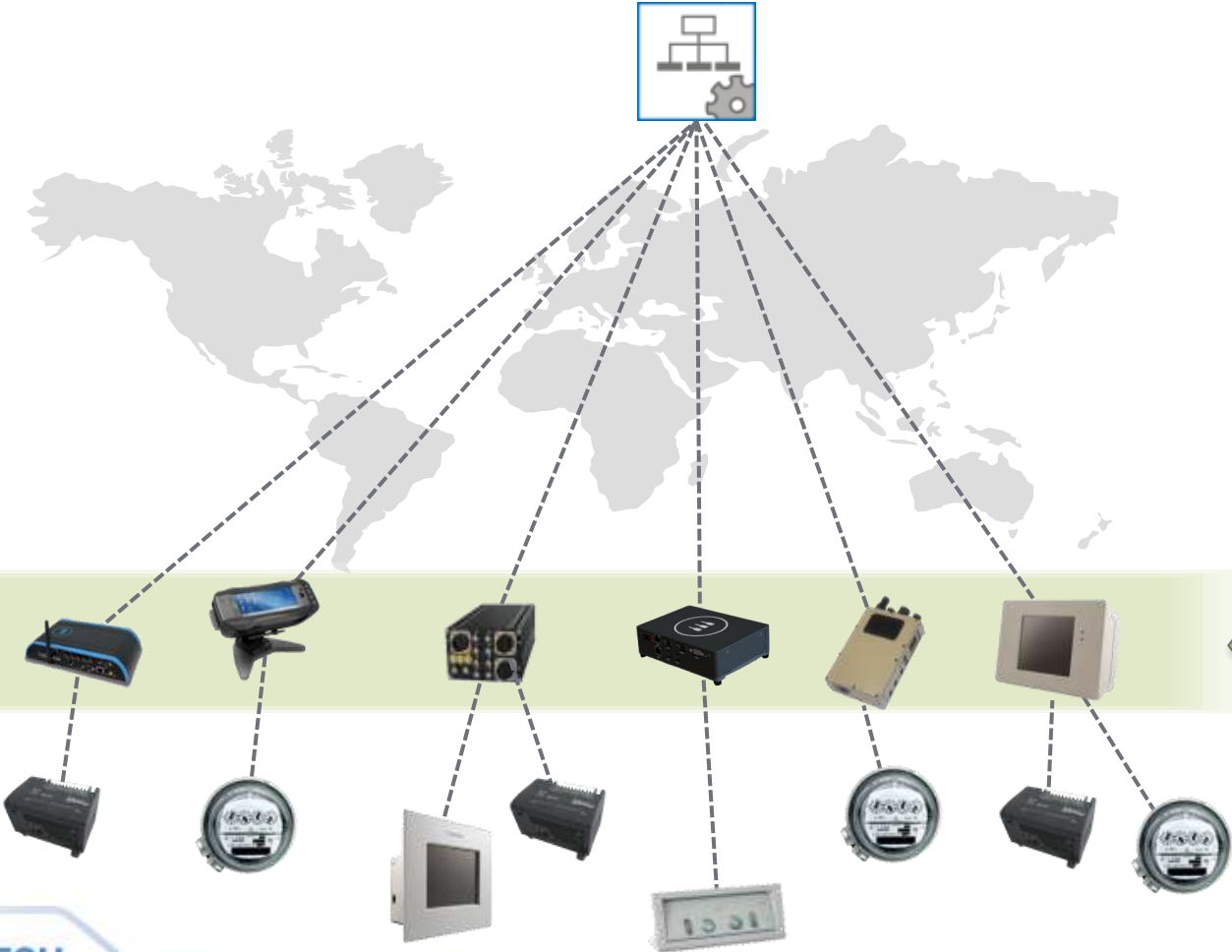
.. but for many Customers Solutions are more Complex

- Multiple services on the gateway / edge node
- Different connectivity options
- More than one kind of vertical market value proposition
- Customer specific business logic



Business Issue

... Geographically Dispersed ...



Business Applications



Multi-Service Gateway

Sensors, Actuators, Displays, ...

Business Issue

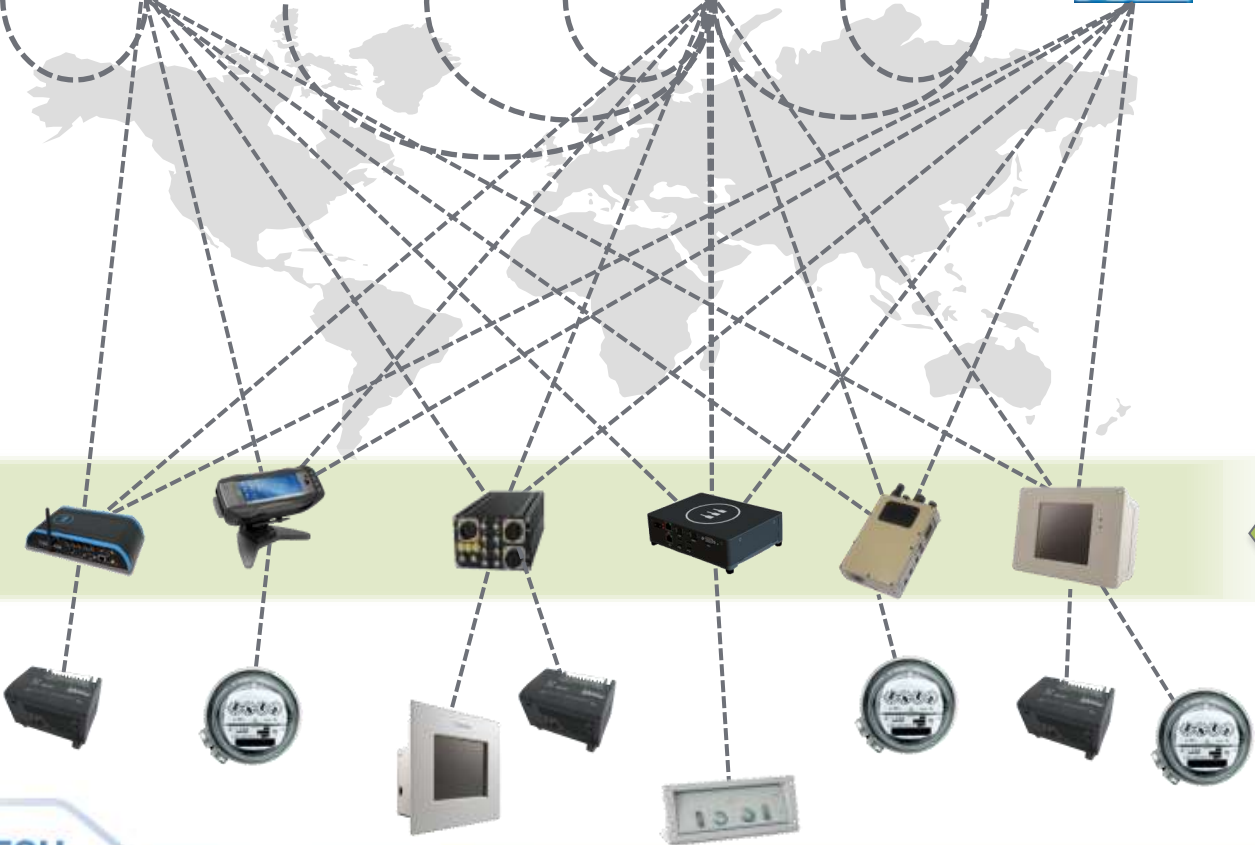
... and with more than one Consumer of the Device Data



Business Applications



Multi-Service Gateway



Sensors, Actuators, Displays, ...

The Internet of Things

Eurotech Offer

Consumers of Data

APIs, Dashboards, Console, etc.

M2M
Infrastructure
Solution

M2M
Integration
Platform

Technology
Building Block

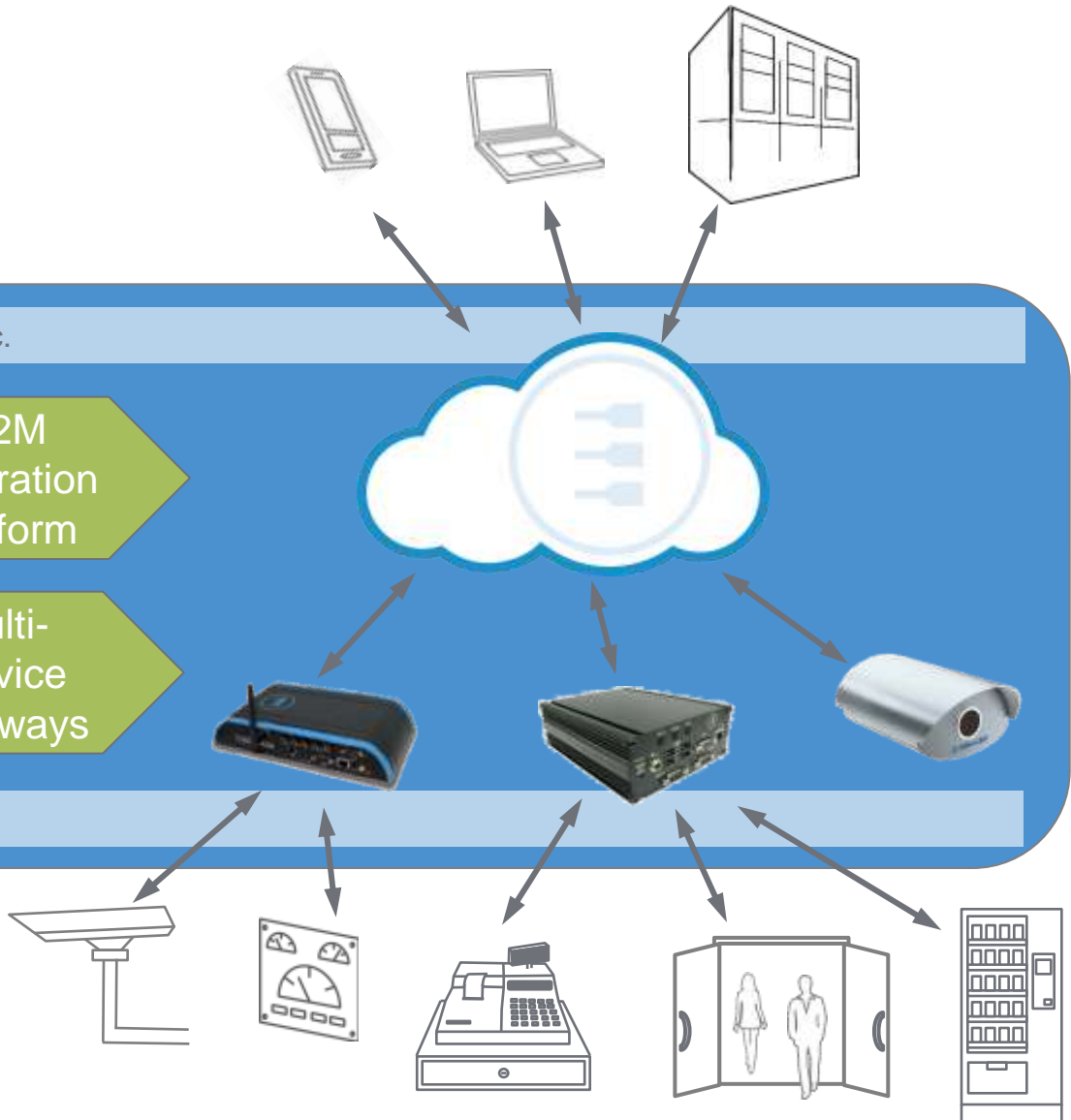
Multi-
Service
Gateways

Standard Interfaces

Producers of Data

EUROTECH
Imagine. Build. Succeed.

EUROTECH



Connecting the field at the Enterprise

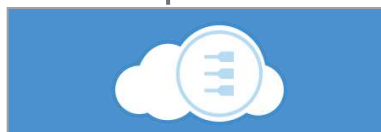
Architectural Components

Business Applications



Enterprise Interfaces

M2M Integration Platform



Integrate
Act
Store
Connect & Control

M2M Protocol

+

Multi-Service Gateway



Collect
Elaborate
Communicate

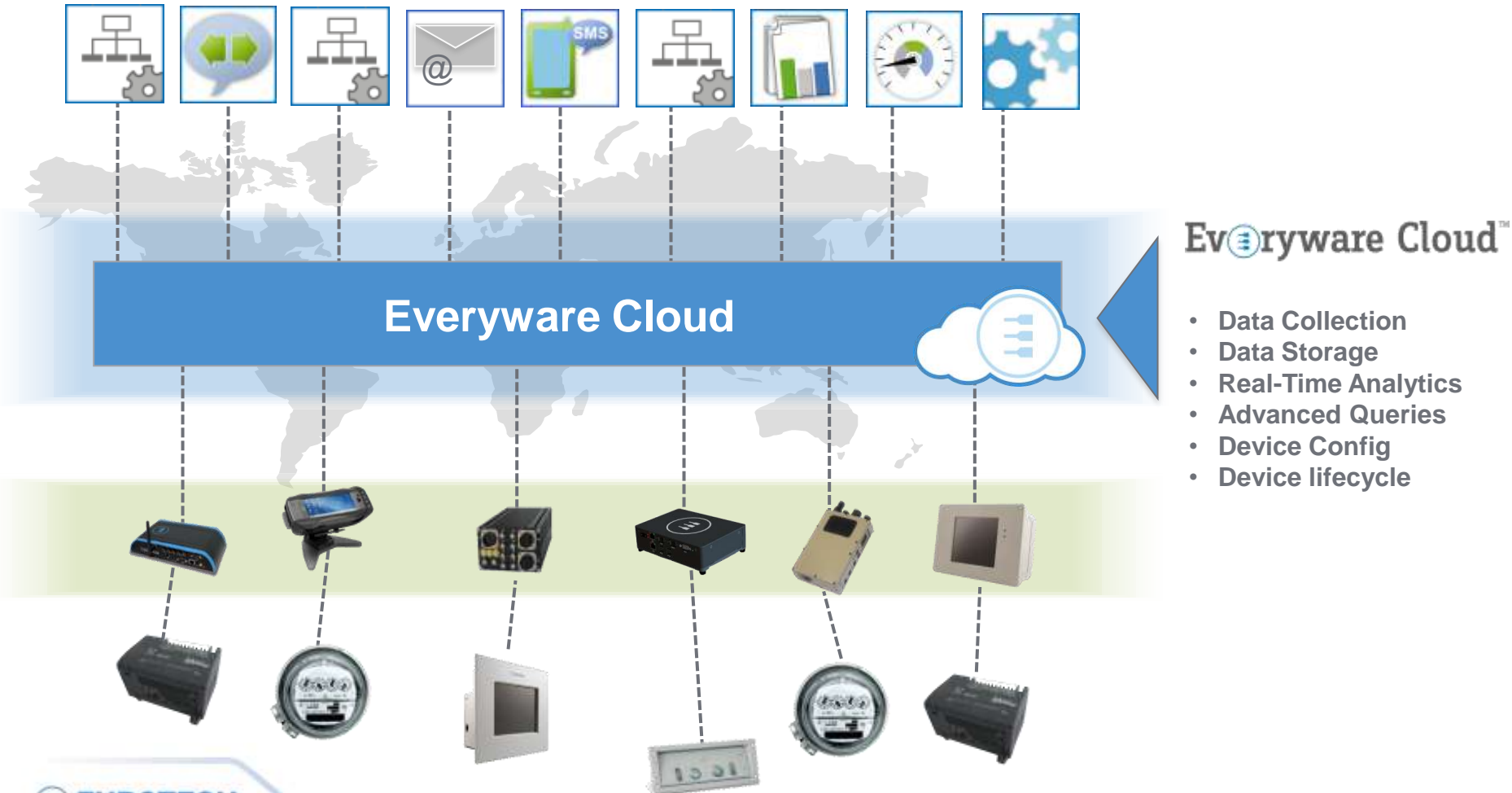
Field Data

Field Interfaces



M2M Integration Platform

We need an “ESB for Machines”, Cloud Platform Approach



Everyware Cloud

Functional Overview

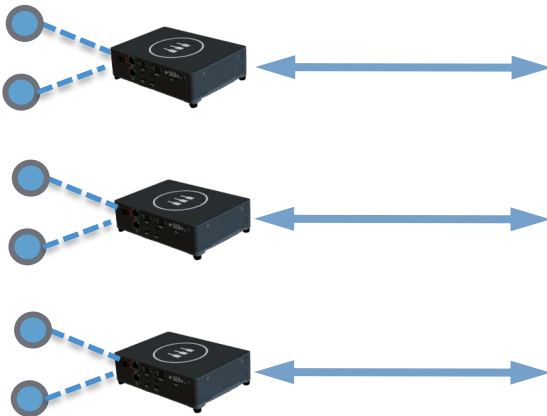
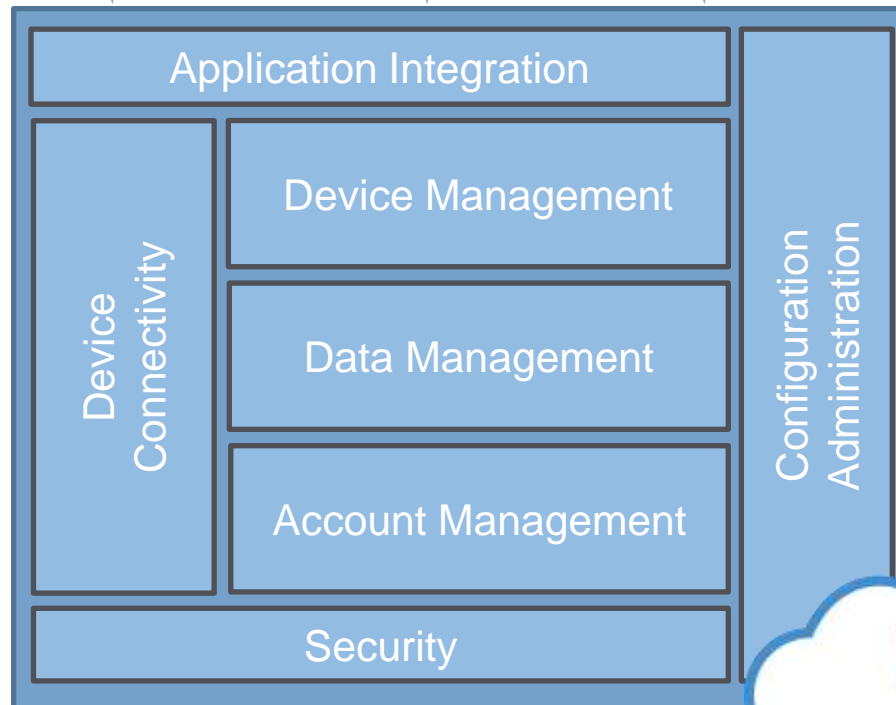
Custom Applications



Enterprise Application



Alerts



Everyware Cloud

Key Features

- **M2M Optimized** – Integration platform designed from ground up to connect M2M devices to Enterprise applications.
- **Connect & Manage** – Any type of device can be securely connected and managed using an open protocol.
- **Independency** – Fully decouples data producers from data consumers through a flexible semantic data model.
- **Secure** – All transactions are secure.
- **Real-Time Analytics** – Sophisticated statistical rules engine to enable real-time data pattern recognition and action triggering.
- **Advanced Data Services** – Schema-less, distributed, decentralized database for data aggregation and advanced queries.
- **Rich APIs** – REST APIs, including PUSH, and integrated visualization.
- **Administration** – Web Based Console for device, data and user management.

Everyware Cloud

Benefits

- A **complete device specific message oriented infrastructure** that allows customers to easily and quickly **build reliable, device-independent M2M applications**.
- Seamlessly **aggregates the best software technologies** into an always-on platform for data collection, management, analysis and integration used in M2M and Enterprise applications.
- Deploys the **underlying technology layer** required to easily build M2M applications and to ease data integration into Enterprise Applications.
- Available as **pay-as-you-go** service, with no initial investment.

Everyware Cloud

Business Model

- **Free development** – Up to 5 devices
- **Pay as you go business model** – Customers pay only for the devices connected and data stored
- **Royalty free client/agent**– Java, C++ client s available in source code

Connecting the field at the Enterprise

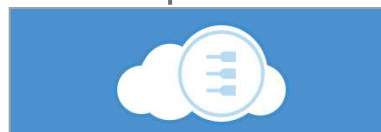
Architectural Components

Business Applications



Enterprise Interfaces

M2M Integration Platform



Integrate
Act
Store
Connect & Control

M2M Protocol

+

Multi-Service Gateway



Collect & Elaborate
& Communicate

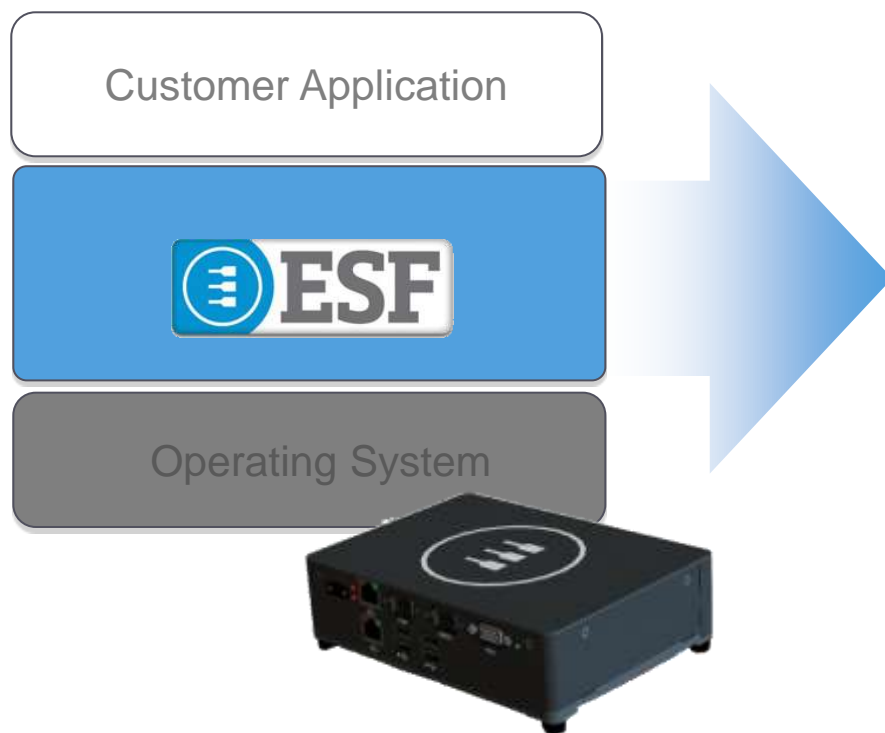
Field Data

Field Interfaces



Everyware Software Framework

Overview



Everyware Software Framework (ESF) is a Java based application framework that simplifies application development for smart M2M Multi-Service Gateways.

Key Features:

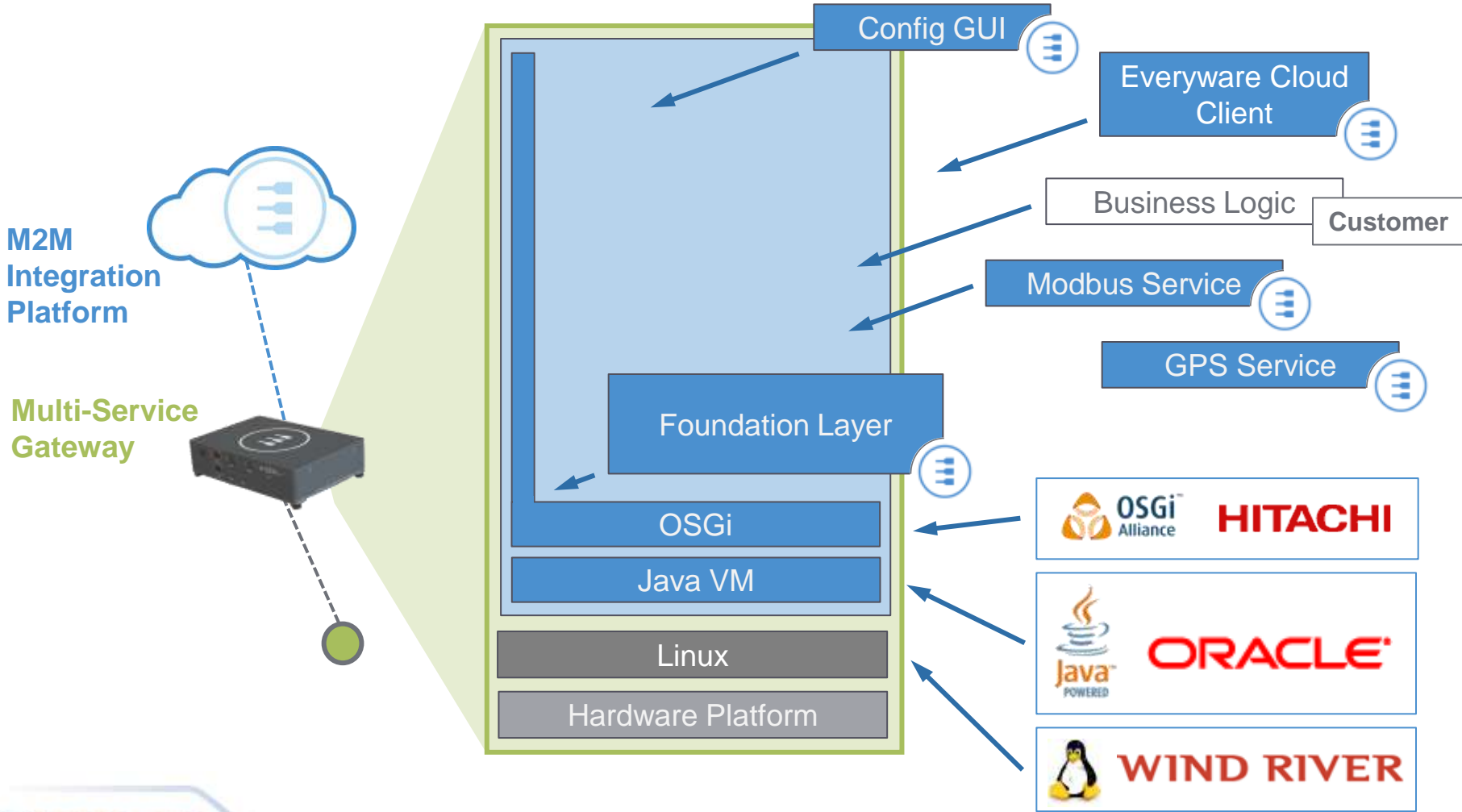
- Field Data Acquisition Protocols
- Optimum M2M Connectivity Protocol (MQTT based)
- Full Java HW Abstraction
- Device/App Management
- Complete Development Tools

Key Benefits:

- App Development Simplification
- Fast Time-To-Market,
- Reduced Risk
- Minimized Effort

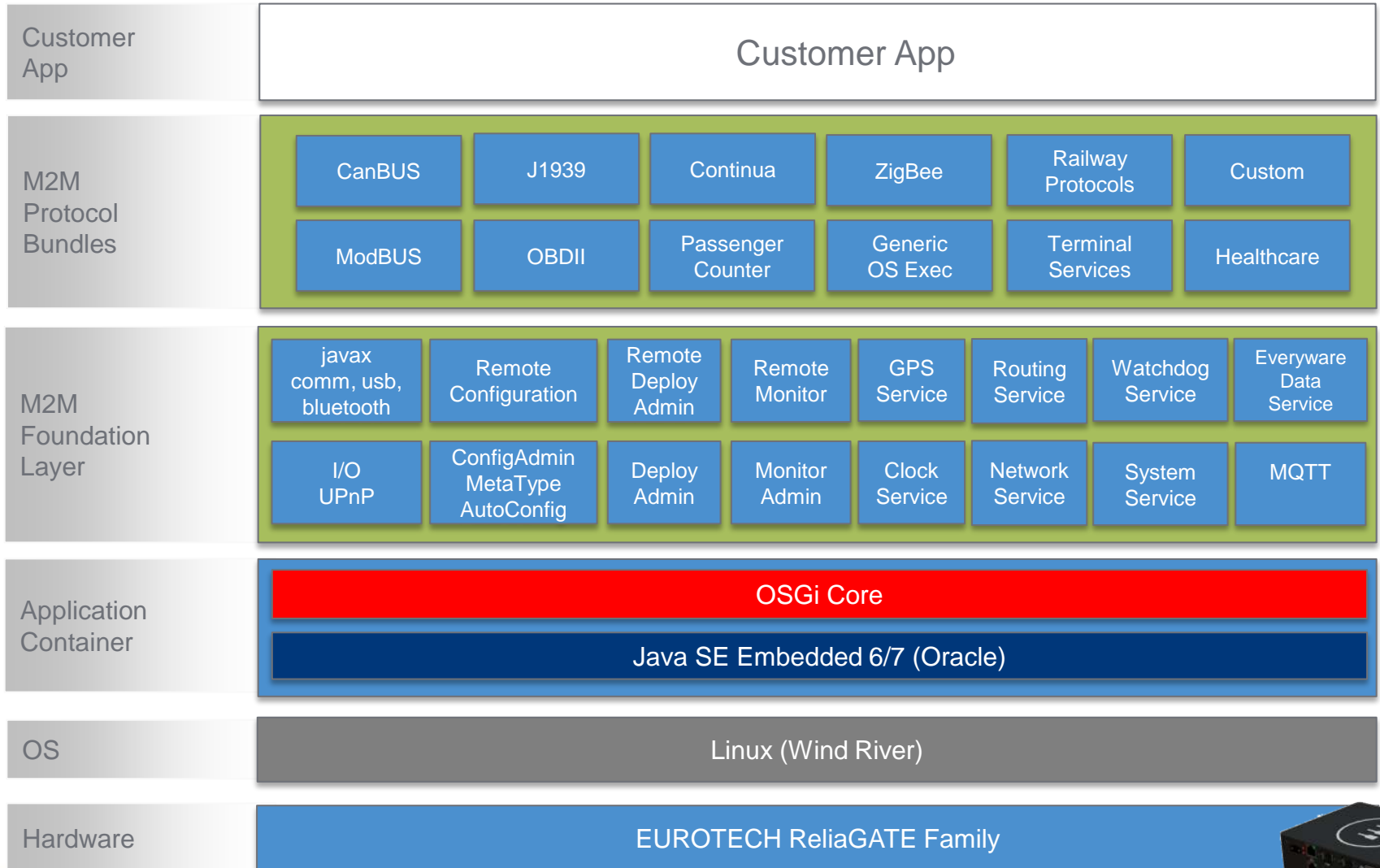
Everyware Software Framework

Components



Everyware Software Framework (ESF)

ESF 2.0 Architecture Overview



Everyware Software Framework

What ESF offers ...

Field Data Capturing – Features proven protocols components for data acquisition from in-field devices.

Application Development – Quickly develop hardware abstracted and flexible embedded applications.

100% Java – Consistent Java-based abstraction APIs over I/O, network, serial, GPS, Cellular and specific hardware components.

Cloud Ready – Built-in cloud connectivity for M2M applications with advanced data and device management services.

Modular – Java/OSGi-based M2M application development platform.

Tools – Advanced development tools based on the industry standard Eclipse platform

Device Independent – ESF runs across device platforms resulting in portable applications and easy to re-use code

Everyware Device Cloud

Hardware Portability

Portability across
ESF Enabled
Platforms



**Boards &
Modules**



Catalyst EC / Catalyst FX



Catalyst TC / Catalyst LP
Catalyst Module XL



PROTEUS
PROTEUS COM Express



ISIS PC/104 Module
ISIS XL PC/104 Module



Zypad BR2000 Man-worn Computer



Dyna-VIS Rugged Panel PC & Vehicle Console



DuraCOR DC 1400 / DC 1200 Rugged Mobile Computer



ReliaGate 50-21

The Internet of Things

Eurotech Offer

Consumers of Data

APIs, Dashboards, Console, etc.

M2M
Infrastructure
Solution

M2M
Integration
Platform

Technology
Building Block

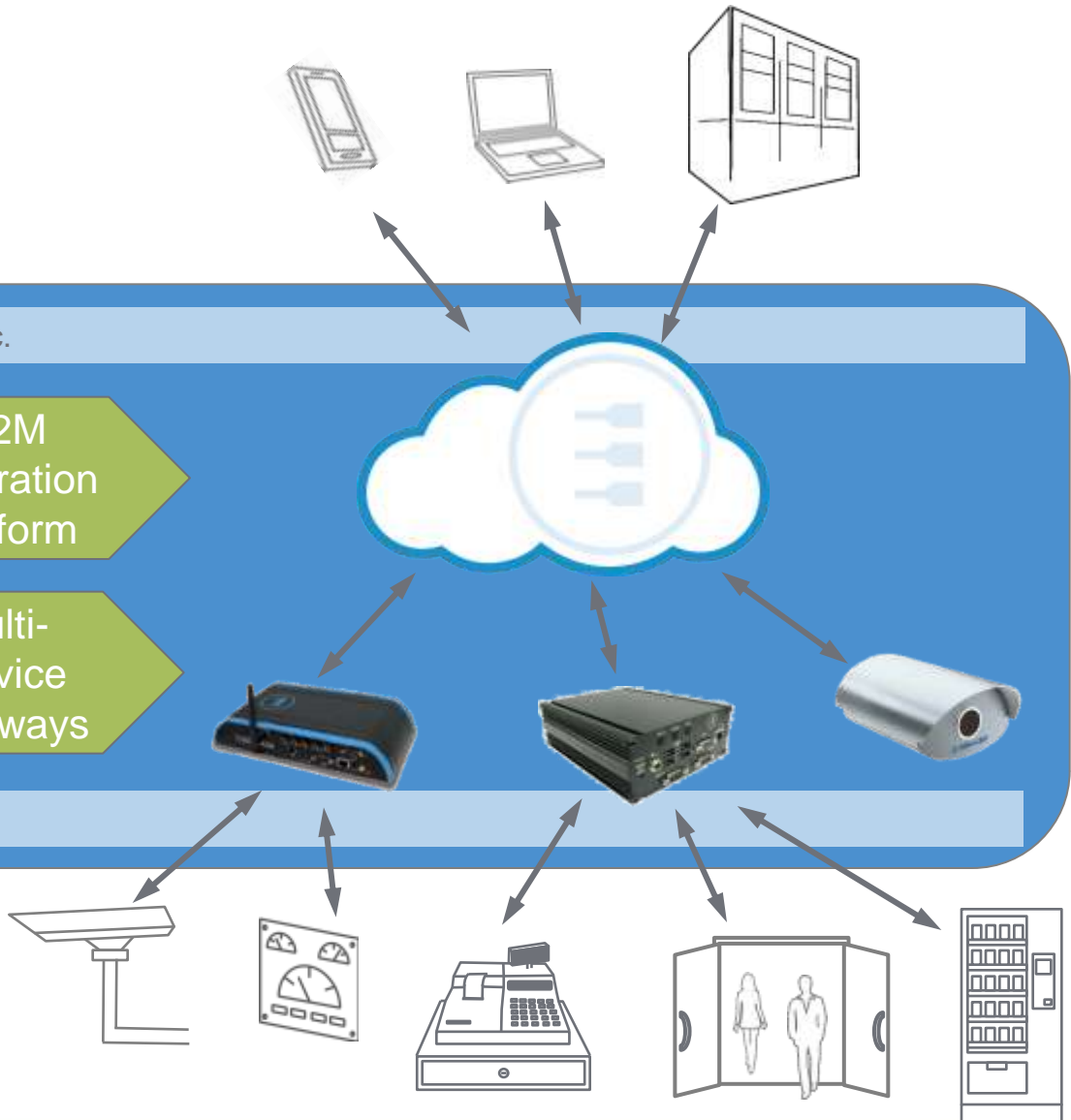
Multi-
Service
Gateways

Standard Interfaces

Producers of Data

EUROTECH
Imagine. Build. Succeed.

EUROTECH



Partner Ecosystem

Technology and business

HITACHI
Inspire the Next

ORACLE



WIND RIVER

ThingWorx

AVNET



NEGENTIS

p.en.lab



WEBRESULTS
ADVANCED SOLUTIONS

The background features a light blue and white gradient. In the top right corner, there are several thin, horizontal lines in shades of blue and green. In the center, the text "Thank You!" is displayed in a large, bold, dark grey font. Below the text, there is a stylized globe composed of glowing white lines. At the bottom, there are several thick, horizontal bands in shades of blue and green, with a semi-transparent circular graphic on the right side.

Thank You!

www.eurotech.com