



**MobiquiThings**  
Connecting Objects

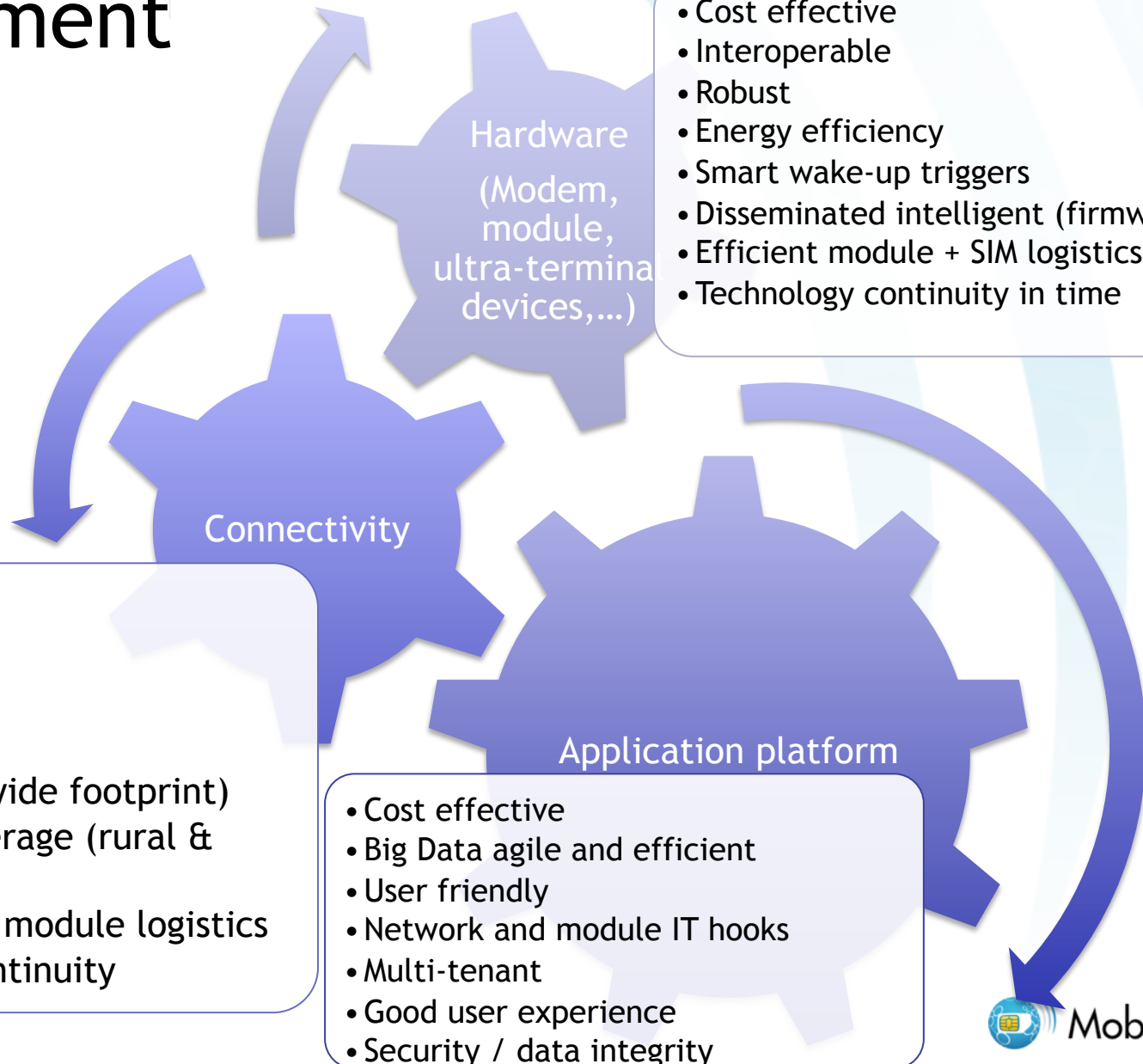
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# Breaking the paradigm of Machine to Machine Connectivity





# Cooking Recipe for a successful M2M deployment



# Wireless Public network / wireless Private network / fixed access / ...

Network type	Weaknesses	Strength
<b>Private radio network</b> PMR, Tetra, Sigfox, ...	<ul style="list-style-type: none"> <li>- Cost and variety of hardware ecosystem</li> <li>- Session based</li> <li>- Often unlicensed spectrum</li> </ul>	<ul style="list-style-type: none"> <li>- Close to E2E system design</li> </ul>
<b>Public radio network</b> 3GPP (GSM, 3G, LTE)	<ul style="list-style-type: none"> <li>- Session based</li> <li>- Variable coverage</li> </ul>	<ul style="list-style-type: none"> <li>- Cost and variety of hardware ecosystem</li> <li>- Network resilience</li> <li>- Worldwide interop</li> <li>- 3GPP &amp; SIM authent + encryption</li> </ul>
<b>Fixed Access</b> DSL, ISDN, PSTN, PLC, ...	<ul style="list-style-type: none"> <li>- Physical link fragility</li> </ul>	<ul style="list-style-type: none"> <li>- Always on</li> <li>- Deep indoor reach</li> </ul>
+ ultra terminal access: RFID, Zigbee, 6LoWPAN, WiFi, ...	...	...

Always On vs Session based; session / idle management  
 IPV4, IPV6 ... public addressing ... DHCP ... complex issues  
 Carrier grade voice in some cases  
 Spectrum interoperability across countries

# Challenges of the traditional offering

## Customer pain points...

Devices suffer white and grey zones from mobile operators and data availability

Hectic Coverage  
& QoS

Lack on visibility on 2G / 3G continuity

Long term  
risk

Pricing &  
flexibility

Lack of tariff flexibility for M2M connectivity +  
International roaming, bundle offers, ...

Poor Extranet  
and back end IS

Lack of control over fleet and devices life cycle  
– Lack of connectivity hooks for smart IS

+ embedded SIM challenges



# Embedded soldered SIM = M2M catalyst ... yet need for multi operator proposition

- ✓ Miniaturization
- ✓ Reliability
- ✓ Manufacturing Process
- ✓ Logistics
- ✓ Fraud Avoidance
- ✓ Design Integration

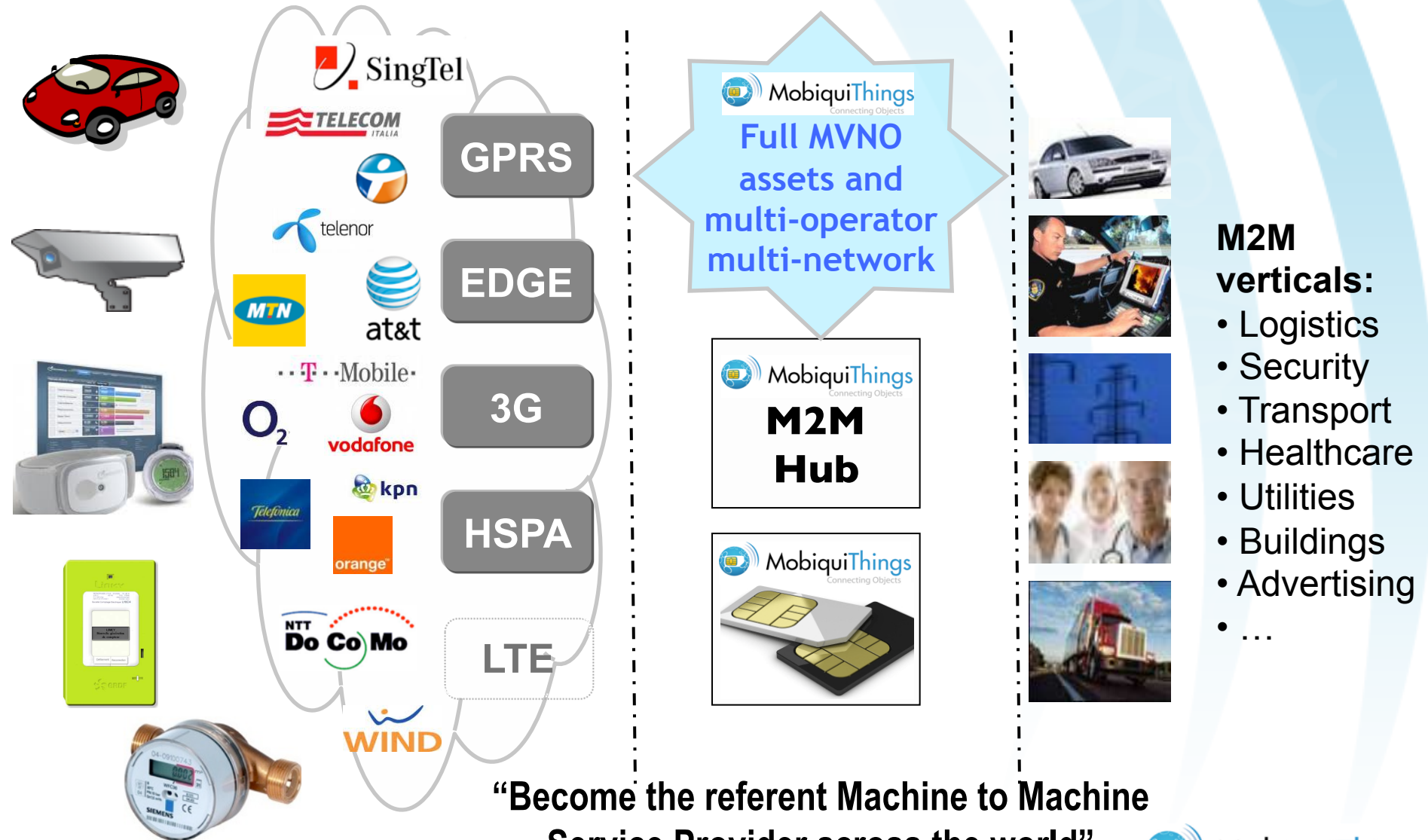


Standard compliant  
ETSI M2M UICC TS 102.671  
JEDEC-STD-020-022 Indust. Electronique

**Downside:  
Intimacy with MNOs**

- Coverage
- Roaming
- Pricing
- Features
- Quality of Service, SLA
- Long-term evolution

# The Solution – M2M enablement



**“Become the referent Machine to Machine Service Provider across the world”**

# Value Proposition – Dynamic Network Attachment



M2M focused proposition

## **Always best connected:**

Maximized radio coverage

Best in class QoS and service availability across geographies

Business Accelerator through **Optimized connectivity TCO** inside country and across borders + revenue catalyst

## **Services Oriented Information System:**

M2M enabling services with Smart Connectivity integrated into Customer IT (Network & IS APIs, Web Services, ...)

## **Technology Continuity:**

Multi operator connectivity enable to mitigate the 2G / 3G extinction perspectives risks


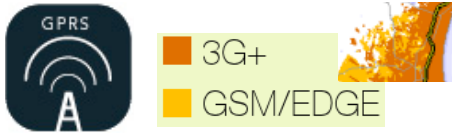

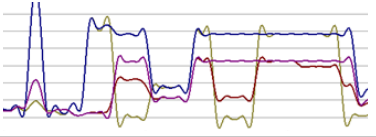


**One Stop Shop service supplier to address efficiently large M2M fleets worldwide**





# Smart SIM - Smart Steering on-SIM applet

Dynamic Network Attachment : make sure the SIM attaches dynamically to the best giving network according to the business/ operational logic of the object

	Signal strength	A
	Services availability	B
	Signal Stability	C
	Latency	D
	Data throughput	E
	Optimized traffic cost	F

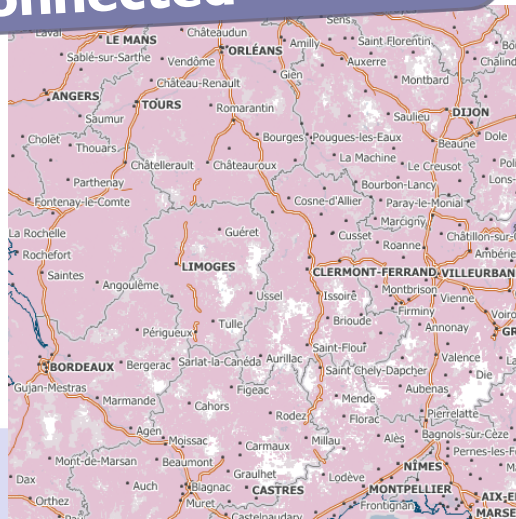
Visited Network arbitration rule = weighting of use case specific QoS criteria.

$$P = A\alpha + B\beta + C\gamma + D\delta + E\varepsilon + F\zeta$$

# Multi-operator “Smart Steering” Quality of Service differentiation

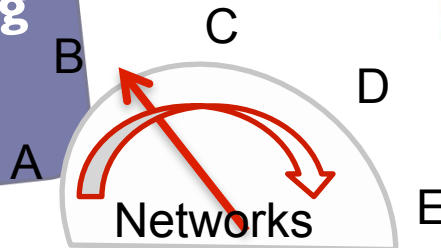


**Optimized Radio coverage and Quality of Service across geographies  
Always best connected**



White / grey zones: Sub-Urban and rural areas

**Reduces Technology risks by agile and dynamic switching according to device fleet operation logic**



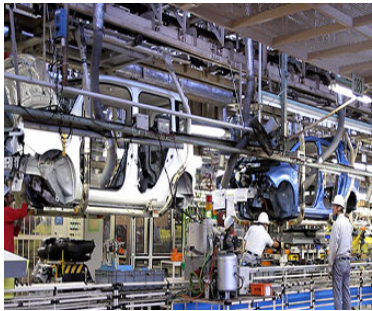
White/ grey spots in Urban Canyons

# Cost savings and operation/ logistics simplification for our customers - **One global SIM**

Production

Shipment/  
logistics

Usage /  
Cross border usage



Scattered  
prod. sites



Drastic logistic simplification – Distribution and Operational cost savings

# Conclusion

- Network & telecom solutions need to be tailored to M2M needs - Global, multi-op smart SIM...
- Information System building blocks (front end, back end, network and IS APIs are key for ecosystem efficiency and cost effectiveness (including it's operation)
- Complementarity of numerous connectivity solution. Sweat spots are not always where expected