Smart Cities

Attributes	Description
Type	New
Industry Sector	IoT and Infrastructure Smart Edge
Business driver	• Increasing and aging urban population • Congestion and traffic • Autonomous driving and package delivery • Smart Energy, water and waste management • Public health and safety, emergency services • Smart buildings, working spaces and living • Smart retail and logistics • Continuous advances in Technology that are driving the digital economy
Business use cases	A city is smart when investments in human and social capital, traditional infrastructure and disruptive technologies fuel sustainable economic growth and higher quality of life, with a wise management of natural resources, through participatory governance. This results from many diverse smart solutions across all sectors of society, filed by a combination of disruptive technologies and social innovation.
Business Cost - Initial Build Cost Target Objective	Cost of a proof of concept, how to deploy an example of a smart city implementation across multiple suppliers and stakeholders. Cost is only for the hardware
Business Cost – Target Operational Objective	Varies widely depending on accessories. The IoT Gateway can be under $500 to over $5,000
Security need	Security mechanisms that can be implemented at each layer of abstraction. PSA and PARSEC both provide a security framework.
Regulations	Varies depending on local regulations
Other restrictions	N/A
Additional details	**Project Cassini** is the open, collaborative, standards-based initiative to deliver a cloud-native software experience across a secure Arm edge ecosystem. Whether exploring the impacts of urbanization and climate change with software-defined sensor networks, pinpointing origins of power outages in smart grids with data provenance, or enhancing public safety initiatives through data streaming, Project Cassini leverages the power of diverse Arm-based platforms to create a secure foundation for edge applications.

Family - Project Cassini - IoT and Infrastructure Edge

Use Case Attributes	Description	Informational
Type	New	
Blueprint Family - Proposed Name	Project Cassini - IoT and Infrastructure Edge	There are many possible UCs that would be covered under Project Cassini
Use Case	All of the use cases under Project Cassini	See below
Blueprint proposed	Smart Cities	
Initial POD Cost (capex)	Varies widely depending on the Blueprint	
Scale of Servers	Varies widely depending on the Blueprint	
Applications	Multiple workloads on devices and gateways, deployed through containers	
Power Restrictions	None/Varies	

Preferred Infrastructure orchestration	Docker/K8 - Container Orchestration OS - Linux	
Additional Details		

BluePrint (Species) - Smart Cities

Case Attributes	Description	Informational
Type	New	
Blueprint Family - Proposed Name	Project Cassini - IoT and Infrastructure Edge Blueprint Family	SC - Smart Camera or other abbreviations
Use Case	Traffic management to reduce congestion, monitor vehicle violations	With a few modifications, it is possible to change this blueprint to meet many similar Use Cases
Blueprint proposed Name	**Smart Cities**	
Initial POD Cost (capex)	Under $300 IoT Gateway- Nexcom SMARTER Stack	
Scale & Type of Server	1 IoT Gateway, a server on the edge is not needed	This is on the customer edge, thus there is no server. The IoT Gateway will handle the connection to the internet.
Applications	Applications that can be managed remotely using cloud native practices	
Power Restrictions	NA	None of the devices require power that is outside of a normal wall socket
Infrastructure orchestration	VM - Linux	
SDN (Software Defined Networking)	None	
Workload Type	- Containers (Tensorflow, Keras containers) - VM- Ubuntu	
Additional Details		

Olivier Bernard will be PTL beginning April 2021 (pending TSC approval)

Committer	Committer Company	Committer Contact Info	Time Zone	Committer Bio	Committer Picture	Self Nominate for PTL (Y/N)
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