Market Interest Group

Standards Joining Forces

IP-BLiS Webinar 2021

Panelists & Moderator Introductions

Panelists and Moderator

Nils-Gunnar Fritz
Member
BACnet International

Tobin Richardson
President & CEO
csa connectivity standards alliance

Paul Drosihn
Managing Director
DALI Alliance

Franz Kammerl
President
KNX

Mark Trayer
Chairman
OPEN CONNECTIVITY FOUNDATION

Vividh Siddha
President
THREAD GROUP

Moderator: Bill Curtis
Resident Analyst
MOOR INSIGHTS & STRATEGY

Casto Cañavate
IP-BLiS chair
IPBLiS

IPBLiS

Arnulf Rupp
Secretary
THREAD GROUP

Makarand Joshi
Board member
csa connectivity standards alliance

IP-BLiS Presentation

IP-BLiS
(Internet Protocol for Building & Lighting Standards)

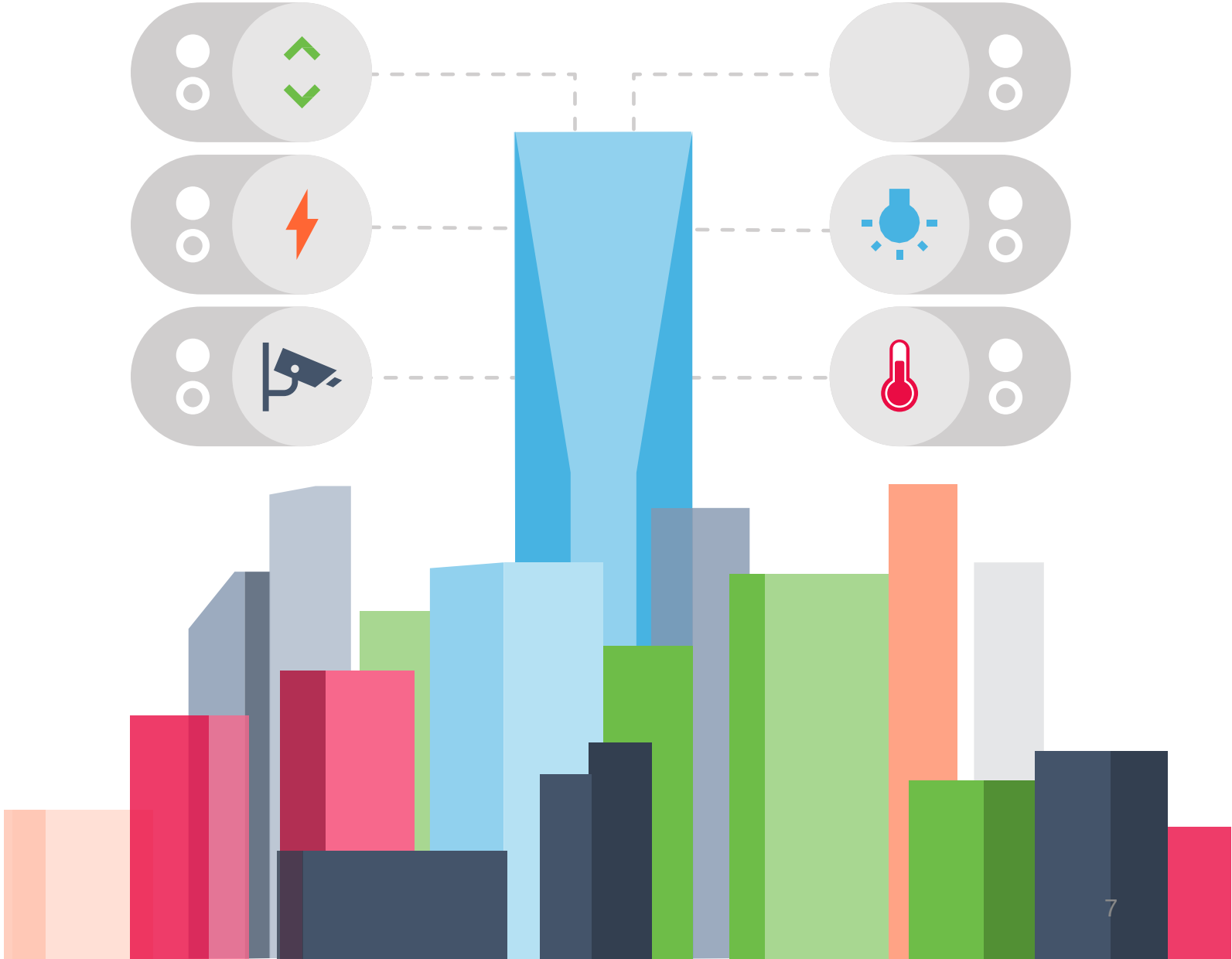
Not a new organization
existing organizations
working together

Today: Many Building Technologies...

There are more connected devices in Smart Buildings every day

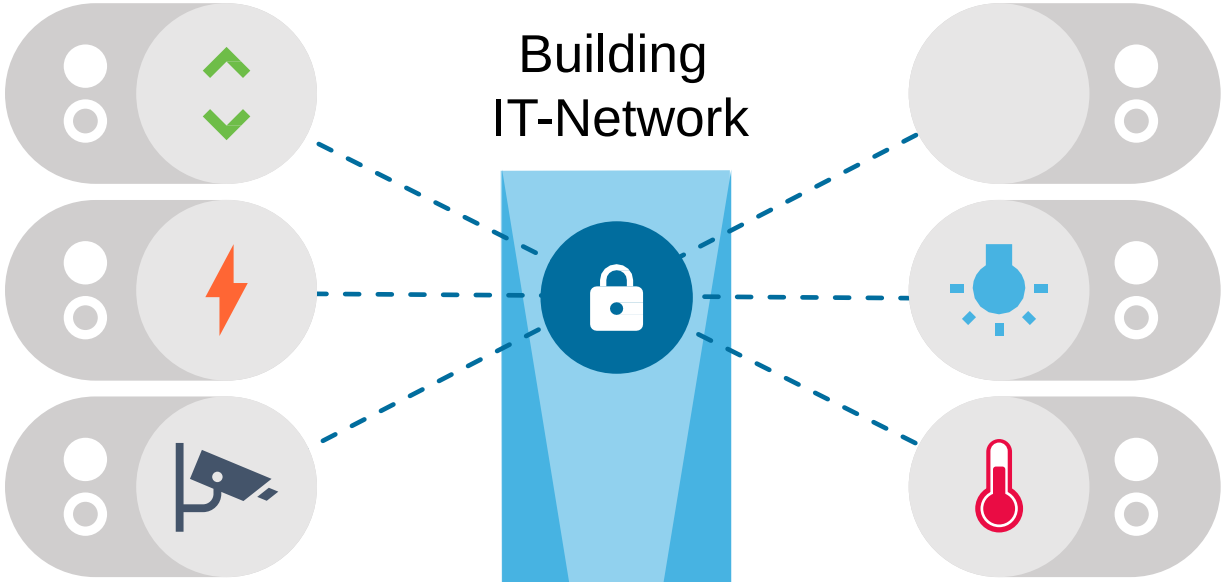
Today: Building Technologies in Silos

Each system evolved independently with their own proprietary solutions.



Trend: Convergence of Building Systems with IT...

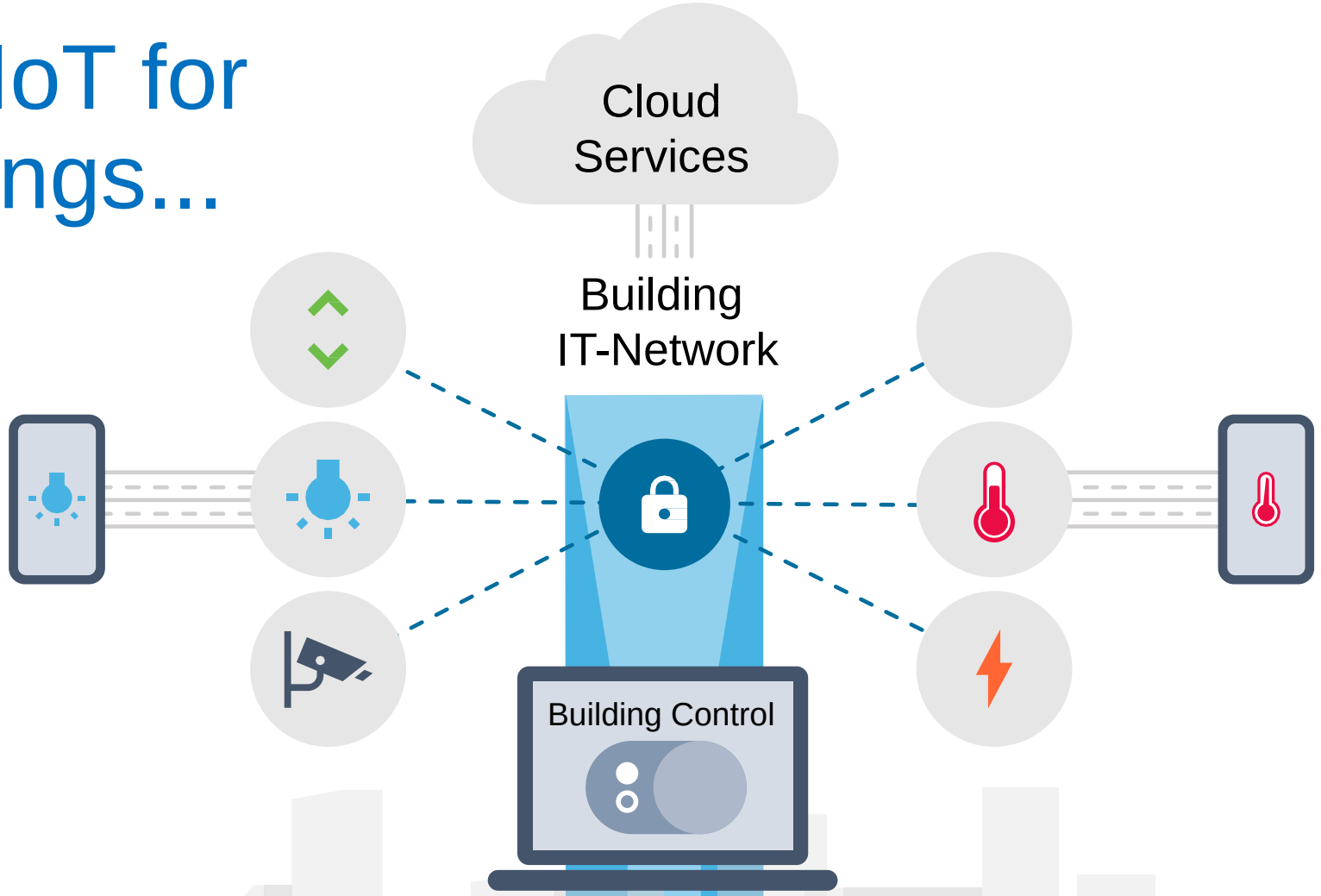
This will result into a common secure IP-based infrastructure.



Trend: Facilitates IoT for Commercial Buildings...

No silos.
No proprietary applications anymore.

It allows multiple systems to communicate together using cloud services & cloud computing



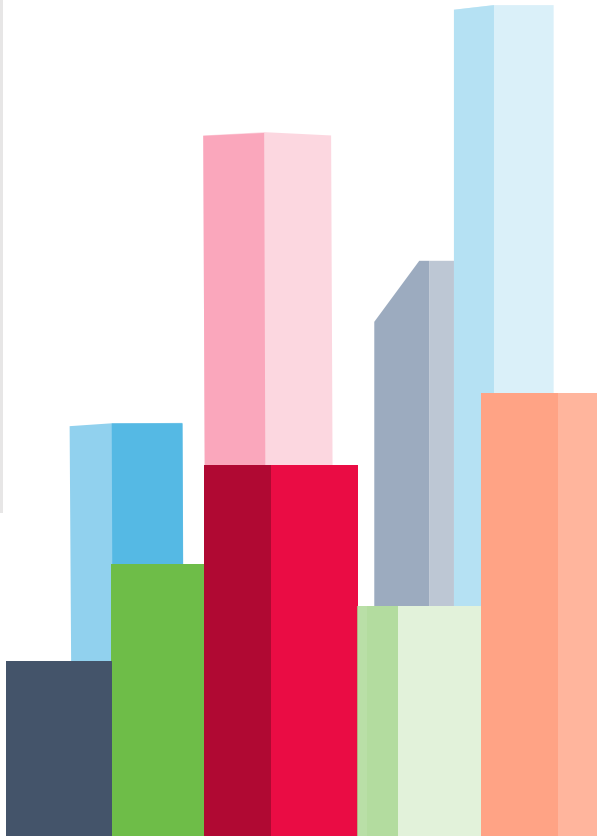
IP-BLiS

Our VISION

To make commercial buildings more responsive to the needs of users by promoting a secure, multi-standard, IP-based harmonized IoT solution

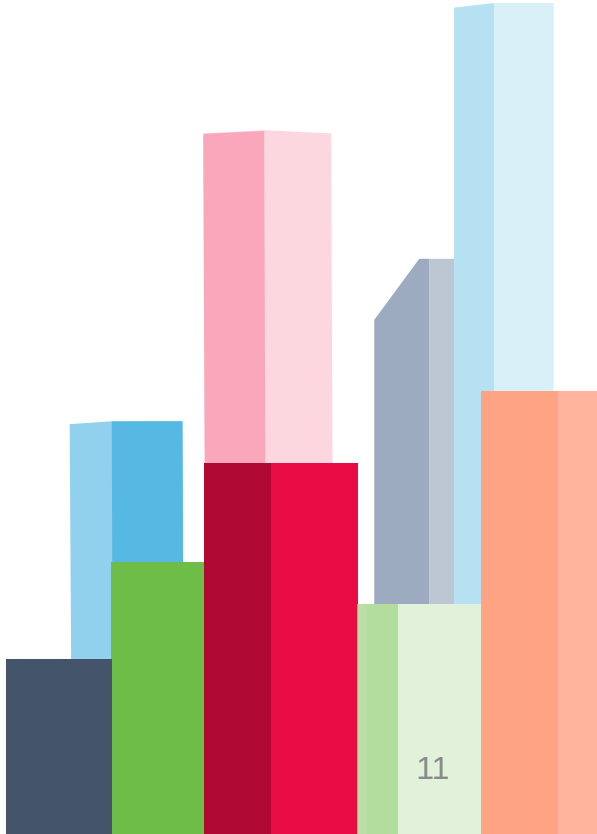
OUR GOAL

Harmonization of access to an IP network with connected building automation products allowing for better integration.

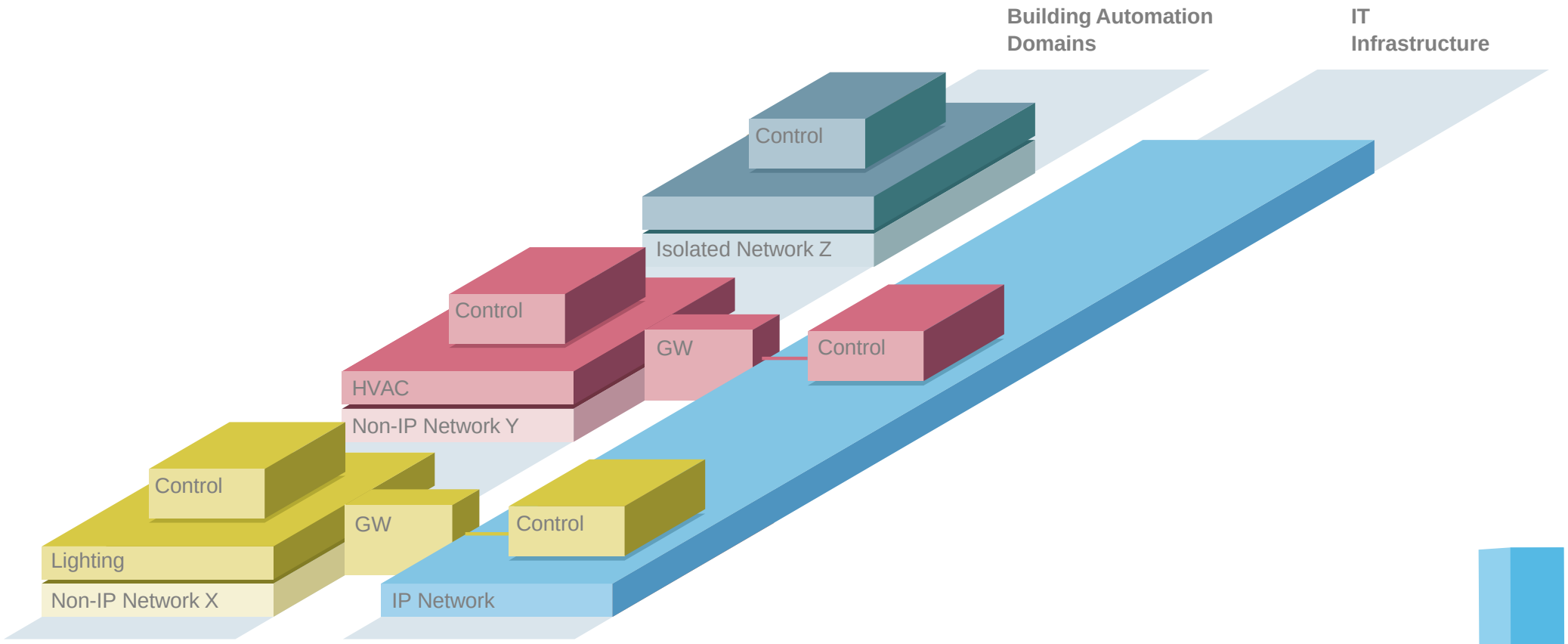


Benefits of IP-BLiS

Single IP backbone	For all building automation products: IP (IPV6)
Common security	Common security in building networks
Simplified support & administration	Eases IT department's ability to support, eliminates need to know application protocol for building automation products
Seamless connectivity options	Seamlessly integrates wired and wireless connectivity options to reduce installation costs
Device groups and policies possible	Uses Common IP networks to allow for monitoring groups of devices instead of single devices
Scalability	Offers limitless scalability & simple cloud integration
Application	Potentially: enables common semantic interpretation of data independent from the used application protocol

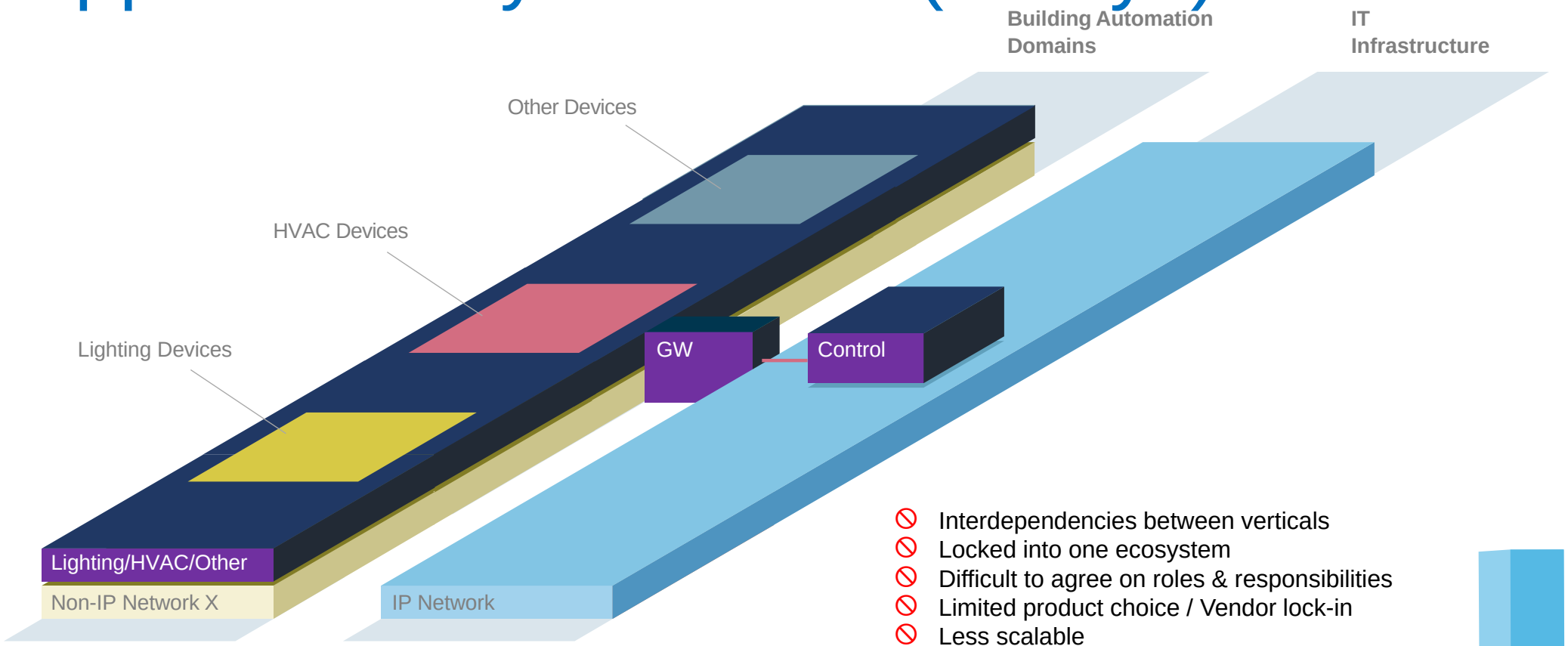


PROBLEM: Isolated building-automation domains and networks



Each domain requires a gateway (GW) to translate proprietary protocols into IP. The building administrator has limited control over individual devices in each domain, and provisioning is complex.

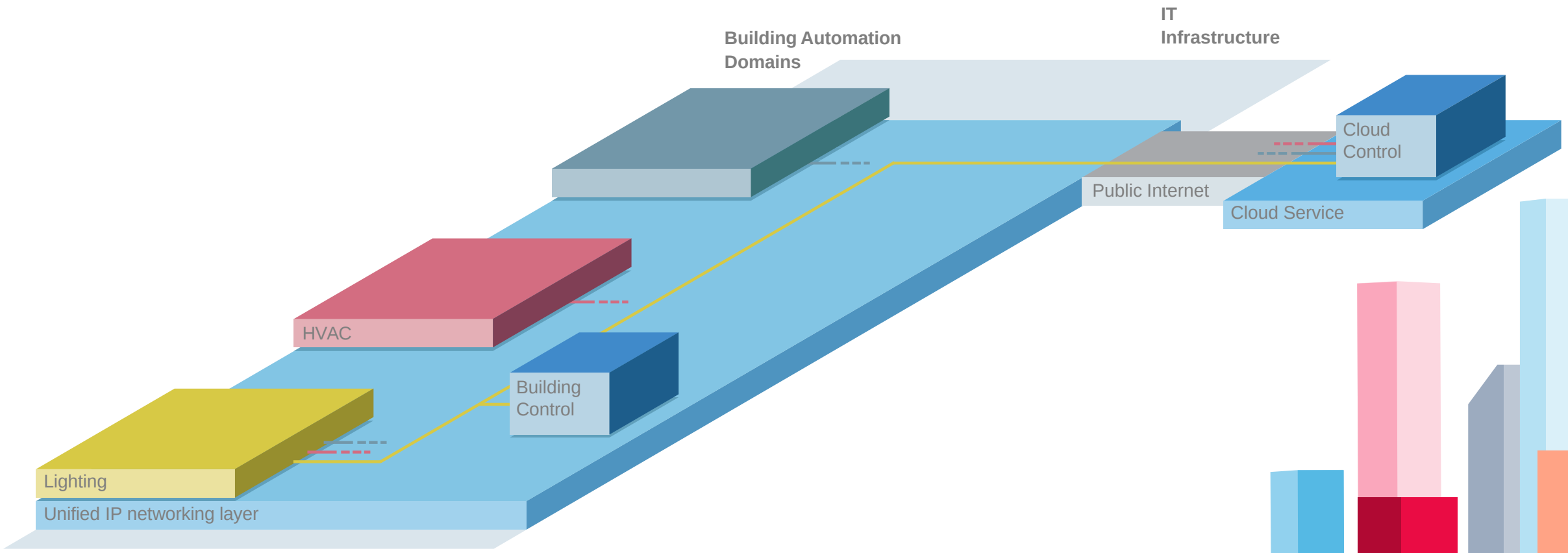
PROBLEM: Why convergence on the application layer doesn't (always) work



- ⊘ Interdependencies between verticals
- ⊘ Locked into one ecosystem
- ⊘ Difficult to agree on roles & responsibilities
- ⊘ Limited product choice / Vendor lock-in
- ⊘ Less scalable
- ⊘ No end-to-end encryption (trusted gateway)
- → May end up with multiple networks

One shared gateway (GW) to translate protocol into IP. GW needs to be managed and trusted by all verticals simultaneously.

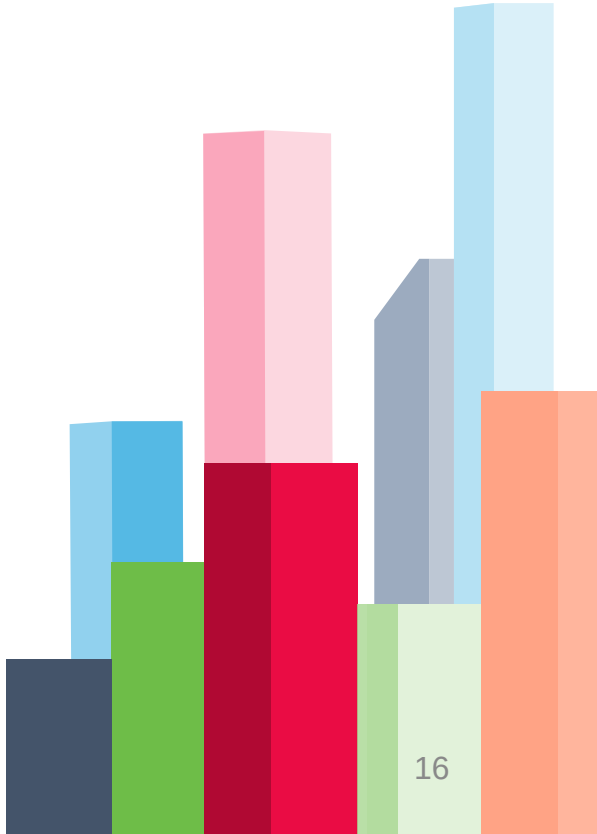
SOLUTION: Common IP-based infrastructure



Building administrators gain streamlined control over application domains, with real-time monitoring of the shared common network, simpler provisioning, and the possibility to extend this to multiple buildings through the cloud.

IP-BLiS in progress

General Marketing activities	www.ipblis.org, PRs, newsletters, different articles, social media plan…
Best Common Practices	Analyzing recommendations and best practices we can promote via IP-BLiS
Commercial Building Lifecycle	Creating our view of the benefits for the different actors in the lifetime of a building.
IP-BLiS IoT Security Landscape	Communicating the regulation vendors will need to meet and how the IPBLiS recommendations will help the market.



Best Common Practices

Presenter
Arnulf Rupp
Thread Group

Best common practices

IP-BLiS is about sharing a common IP network for all building automation tasks.
Common practice and commonality are important to make building automation IT friendly.

IP-BLiS members contributed to an analysis identifying common best practices.

HIGHLIGHTS:

BACnet CSA DALI KNX OCF Thread

Device Addressing:	IPv6 / NAT64 for IPv4 integration / SLAAC / UDP for group comm.
Service Discovery:	Operational ID / no reliance on stable IP / registry (where possible)
Security:	Application layer security by domain / shared network security
Physical Layer support:	Focus on Ethernet, Thread and WiFi / not excluding others
Infrastructure Requirements:	No permanent internet access required / IPv6 not required

Commercial Building Lifecycle

Presenter
Mak Joshi
CSA

Commercial Building Lifecycle

Manufacturer

Wholesaling

Investor → Architect, Specifier → Planner/consultant → Installer → System Integrator → Facility manager / Occupant

Based on building objectives, specify, plan and acquire devices/assets.
Physically mount and wire devices & perform a basic functional test

Manufacture and introduce asset

Specification, planning and installation

Involves various dimensions. Existing vs. new networks and regulatory compliance

Commissioning

Integrate the lighting/HVAC/ electrical/security systems

Hybrid environment
Deliver on building objectives and sign-off

System integration

Life-cycle management

Buildings are dynamic. Tooling crucial for diagnosis, maintenance

System behavior may be reconfigured by configuration engineer/occupant

Facility Manager and IT responsible for smooth operation

Circular economy and waste disposal

EOL and Dispose

IP-BLiS IoT Security Landscape

Presenter
Mark Trayer
OCF

IP-BLiS IoT Security Landscape

Secure IoT Regulation and Requirements:

IoT Cybersecurity Improvement Act of 2020 :

- NIST 8259D (USA)
- The Biden Executive Order on IoT security

Internet-connected radio equipment and wearable radio equipment

- ETSI EN 303 645 (EU)
- The EU cybersecurity certification framework

Common Provisions:

- Device Identity
- Device Configuration
- Data Protection
- Logical Access to Interfaces
- Software Update
- Cybersecurity State Awareness
- Device Security

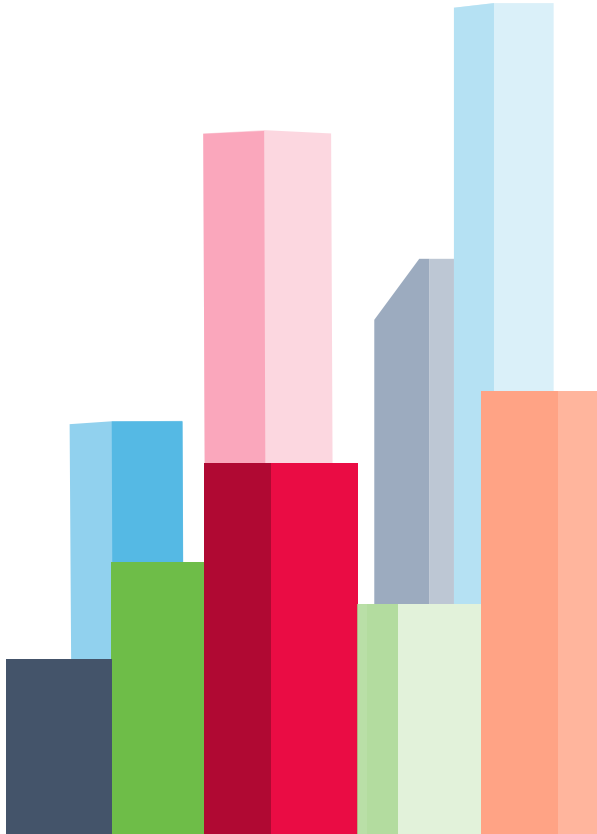
Critical Features:

- Application-Level Security
- Secure communication over multiple IP segments

Q&A Session

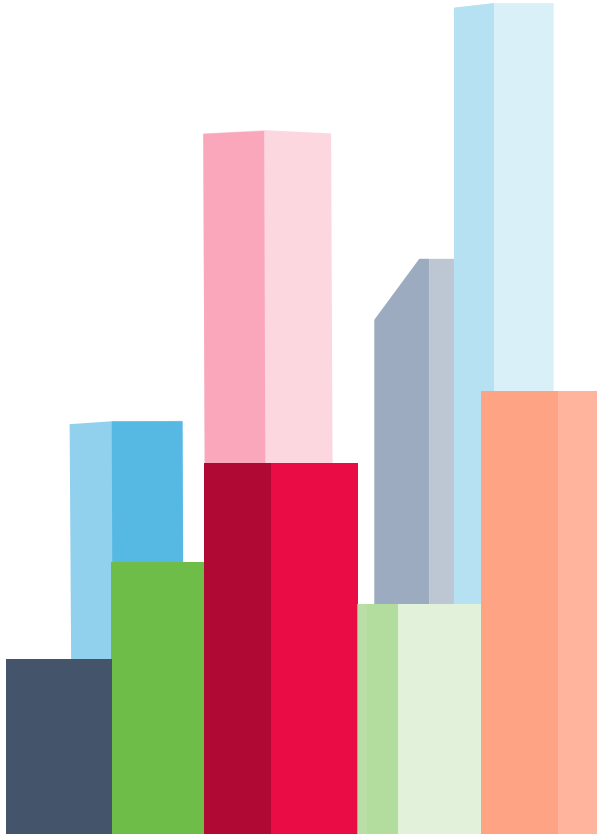
Q1 - Commercial Building Lifecycle

How will the commercial building lifecycle change with IP-based standards?



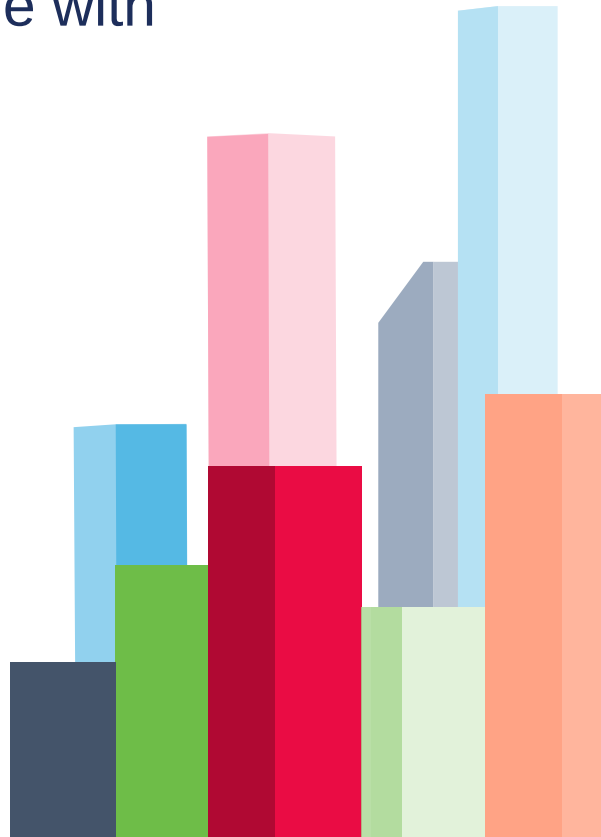
Q2 - Commercial Building Lifecycle

Are people already using or expecting to use remote access?
What roles can be done remotely?



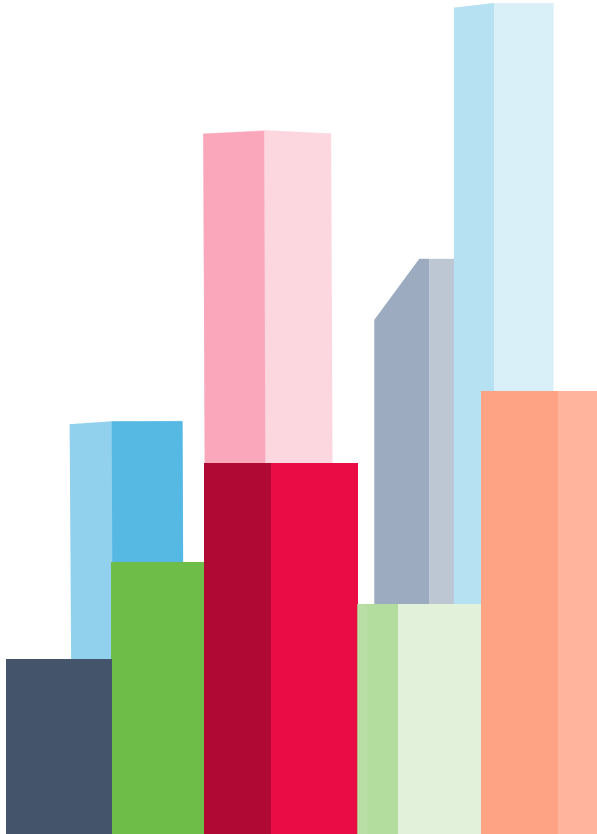
Q3 - Best Common Practices

Today, different field bus (Device network) technologies are used in building automation. Even the same technology may be deployed multiple times because it is difficult to manage integration. How do you see this change with IP-BLiS? What will change due to IP-based standards?



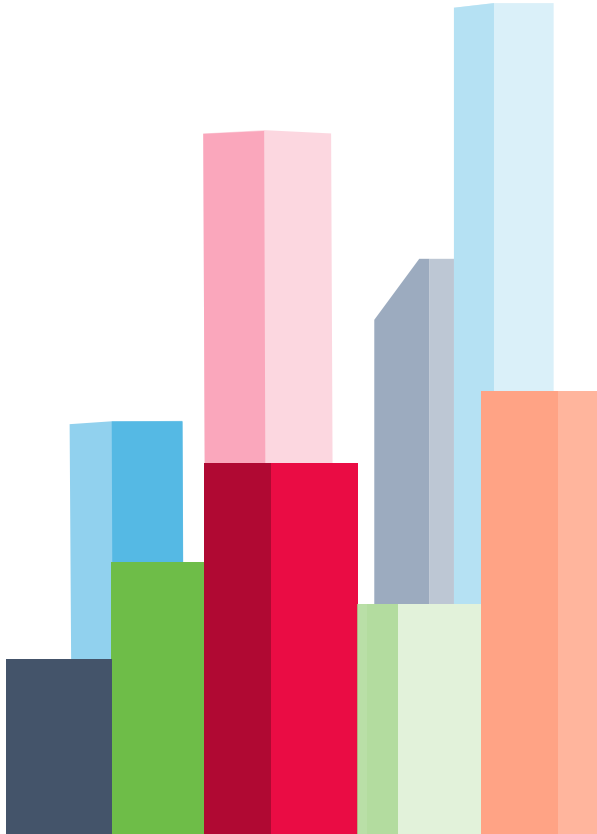
Q4 - Best Common Practices

Sharing the network between different application domains is often considered problematic due to coexistence and security concerns. What do you expect happening in the future and how can IP-BLiS support this?



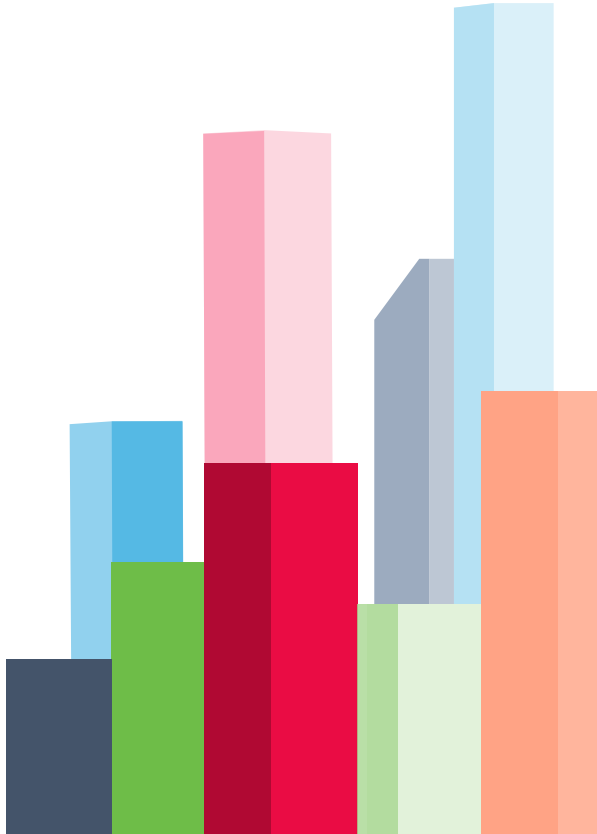
Q5 - IP-BLiS IoT Security

How has Covid-19 influenced the cybersecurity landscape?



Q6 - IP-BLiS IoT Security

What are the implications of the Biden’s Cybersecurity Executive Order in May?



Thank you very much

Contact: info@ipblis.org

Web: www.ipblis.org

LinkedIN: https://www.linkedin.com/company/ipblis