THE HYPERCAT STANDARD
THE PURPOSE OF HYPERCAT

DRIVING SECURE AND INTEROPERABLE INTERNET OF THINGS FOR INDUSTRY AND CITIES
IOT (SMART SYSTEMS) STACK

- **Clients** (UX and other services)
- **Cloud services** (Storage, Analytics)
- **Gateways** (devices onto the Internet)
- **Devices** (sensors & actuators in the real world)

HYPERCAT for ALL
HYPERCAT STANDARD

HYPERCAT

Resource Discovery
Common, machine-readable API
HTTPS, REST, JSON
Annotate existing APIs
A simple foundation

Next Phase
Security
Subscription
Search
Data licenses
HYPERCAT CONSORTIA AND PAS 212

PAS 212 Automatic resource discovery for the Internet of Things – Specification

http://shop.bsigroup.com/pas212download
THE PROPOSED HYPERCAT COLLABORATION

Convening communities, finding consensus and accelerating market development

Bridge building

The Web of Things approach: bridging isolated platforms

Smart infrastructure
Digital health
Connected and autonomous vehicles
Smart cities
Digital manufacturing
BIM Level 3
Smart transport

Platform A
Platform B
Platform C
Platform D
Platform E
HYPERCAT COLLABORATION
AIMS

• Stimulate the development and the continuous improvement of specific standards and specifications overseen by each body;

• Provide a coordinating function to exchange insights, identify overlaps, and prioritise further work needed to advance sector-specific applications;

• Provide a convening function of the different sectors (smart infrastructure, etc) working in IoT;

• Develop strategy, technical and policy white papers, reports, guidelines, and other outputs to help drive the global adoption of IoT services;

• Provide strategic input into and develop a joint position vis-à-vis other standards development organisations as appropriate;

• Improve each other’s work efforts;

• Accelerate the development of open markets of IoT services based upon open standards;

• to counter the fragmentation due to incompatible platforms, standards and protocols.
HYPERCAT COLLABORATION – ACTIVITIES 1/2

• Convening and consolidating the UK IoT community, taking advantage of the UK government mandate to use the Hypercat specification in the IoT City Demonstrator and NHS test beds (BSI lead).

• Convening and consolidating the international IoT community with events and workshops covering ‘business’ and ‘technical’ area (BSI/W3C lead).

• Engaging and influencing government and other funders and investors to require the implementation of the Hypercat specification in different sector applications (BSI/W3C lead).

• Driving international implementation and adoption of PAS 212 and associated standards (BSI/W3C lead).

• Developing and maintaining an appropriate IoT standards strategy and roadmap, including: creating and updating fast-track standards and guidance documents providing a route into and influencing the international standardisation system (BSI/W3C lead).

• Delivering a marketing and communications strategy, including organising the Hypercat summit and networking events, speaking at major conferences, managing the HA website, etc. (BSI lead).

• Developing research projects, case studies and premium content to enhance commercial advantage for HA members (BSI lead but with close W3C involvement).

• Providing assessment services on an automated basis using the Hypercat logo (BSI lead).
• Gathering and analysing use cases across different application domains (W3C lead).
• Identifying and exploring broad challenges relating to privacy, security, interoperability and open markets, etc. (BSI/W3C lead).
• Coordinating with W3C groups to facilitate effective transfer of requirements (W3C lead).
• Coordinating with other industry groups and standards development organizations on technical matters (BSI/W3C lead).
WHERE TO GET STARTED

- Very simple spec (6 pages)
  - http://www.openiot.org/apis

- Build on the open standards you already use
  - HTTPS, RESTful, JSON

- Growing set of Catalogues to test against

- Growing set of Tools for Client & Services
  - Online, and as Code Libraries

- See http://wiki.1248.io
HYPERCAT IS NOT A PANACEA

- Applications and Services still have to agree on high level semantics
  - i.e. if a service provides temperatures in °C then the application needs to understand °C

- What HyperCat does is enable an application to **find** those things that it does understand, in any service
  - e.g. “show me all the resources which deliver temp readings in °C”
Hypercat alliance to maintain and further the standard, first overseas chapter in Australia, others are being discussed.