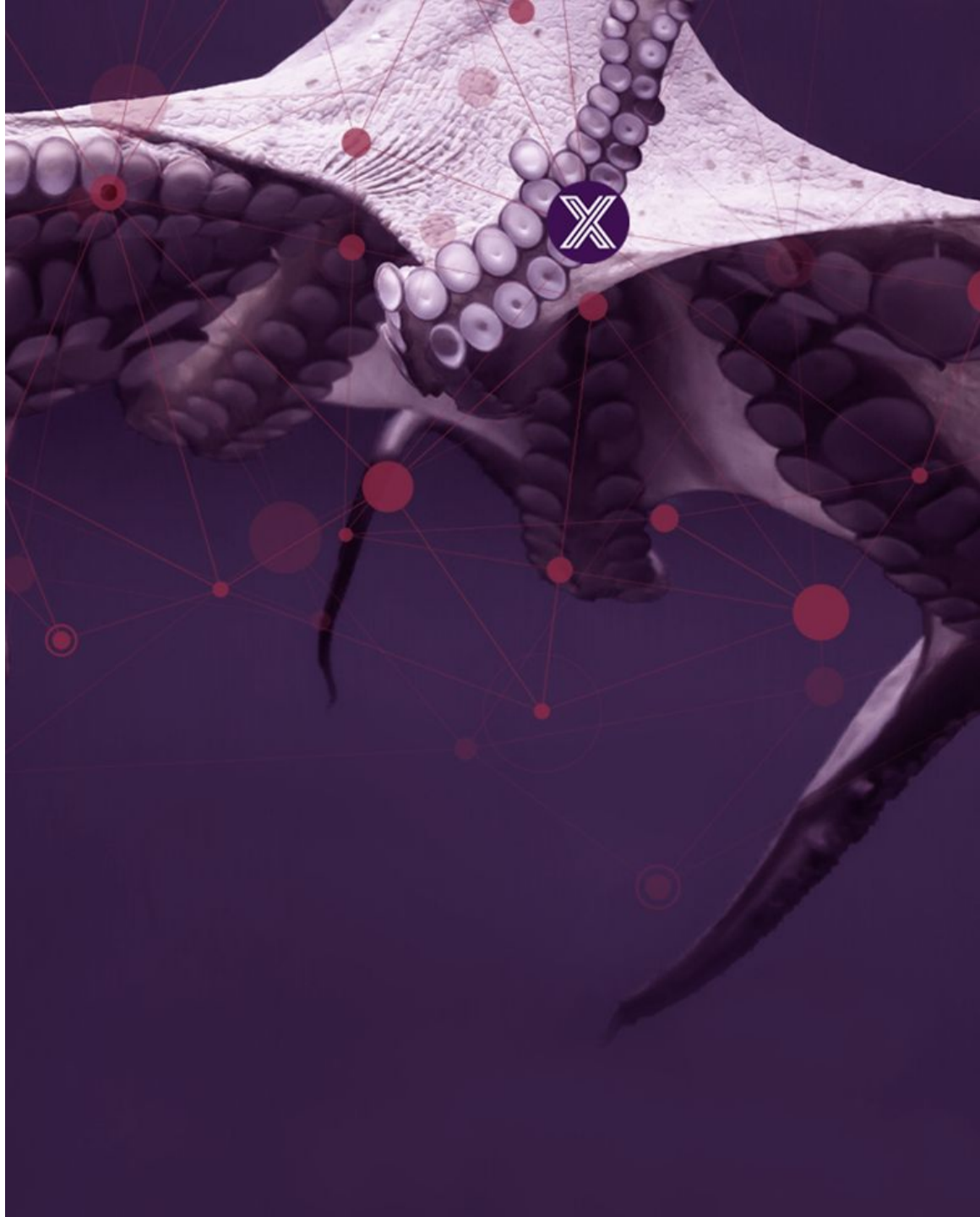
EDGE X FOUNDRY™

TSC Meeting

January 23, 2019



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Meeting Logistics

Time: January 23, 2019 7am PST – 8am PST

Join from PC, Mac, Linux, iOS or Android: https://zoom.us/j/983155298

Or iPhone one-tap (US Toll): +14086380968,983155298# or +16465588656,983155298#

Or Telephone:

Dial: +1 408 638 0968 (US Toll) or +1 646 558 8656 (US Toll)

+1 855 880 1246 (US Toll Free)

+1 877 369 0926 (US Toll Free)

Meeting ID: 983 155 298

International numbers available: https://zoom.us/zoomconference?m=mkFexUxEcqHlvXHw53PqScTDRvS48PiQ

** TSC calls are recorded and added to Wiki post-call

TSC – Members Present Today

Company	Name	Email
IOTech	Andy Foster	andy@iotechsys.com
ForgeRock	David Ferriera	david.ferriera@forgerock.com
Mainflux	Drasko Draskovic	drasko@mainflux.com
Intel	James Gregg	james.r.gregg@intel.com
Mainflux	Janko Isidorovic	janko@mainflux.com
Dell	Jim White (TSC Vice Chair)	james.white2@dell.com
IOTech	Keith Steele (TSC Chair)	keith@iotechsys.com
Samsung	Moonki Hong	moonki1.hong@samsung.com
IOTech	Steve Osselton	steve@iotechsys.com
Canonical	Tony Espy	espy@canonical.com
Dell	Trevor Conn	Trevor.Conn@dell.com

Current quorum = 8 members

*Note: TSC meetings shall require a **quorum of two-thirds of the TSC total members to take a vote or make a decision.** If a TSC meeting fails to meet the quorum requirement, discussions may proceed, however there shall be no voting or decisions. Decisions by vote at a meeting require a majority vote, provided quorum is met.*

Today’s Agenda

- WG Updates
- EdgeX Certification Update
- Dev Kit Demo - James Butcher
- Next TSC F2F
- Upcoming Events
- AOB

EDGE X FOUNDRY™

Work Group Updates

Chairs

Working Group Chair Updates

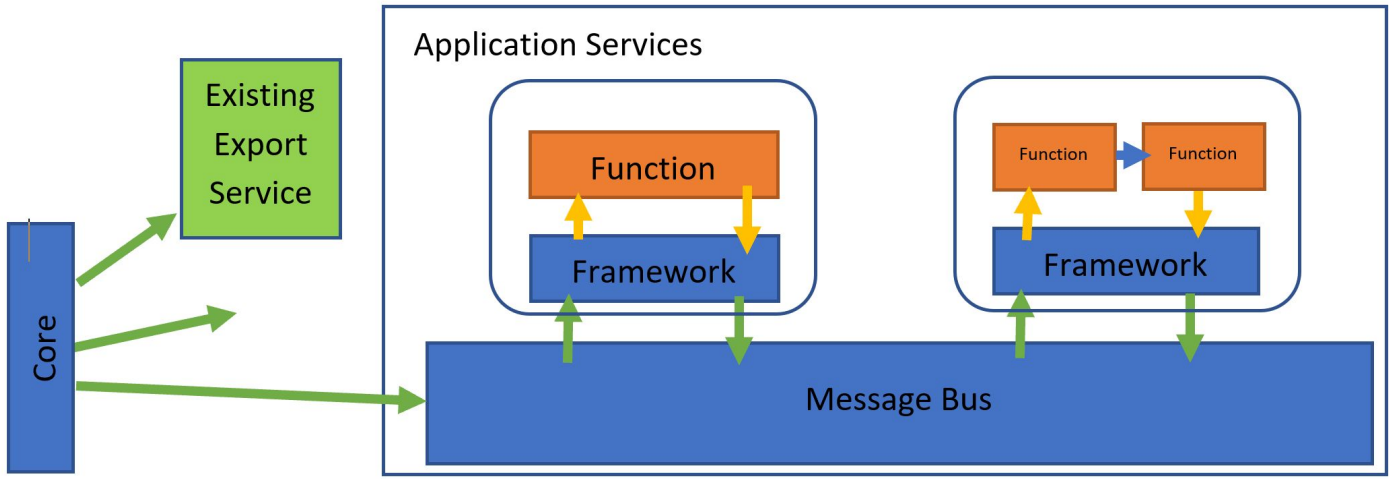
- Around the horn
  - Core/Supporting - Trevor
  - Applications - Janko
  - Device Services - Steve
  - Test/QA - Andy
  - DevOps - James
  - Security - David
  - System Management - Jim
  - Vertical Solutions - Moonki
- Developer Outreach - Michael

Core Working Group (23-Jan-19)

- Mongo model decoupling finished
  - Thanks to Daniel Harms, Michael Estrin for their efforts
  - API contract changes have also been integrated with device-sdk-go
- Service return codes
  - We now call os.exit() when services end, except in case of a panic
    - 0 = normal exit
    - 1 = error condition
  - Motivated by use cases related to Docker Swarm and Snappy (see issue #638)
- Service Correlation IDs nearly complete
  - Facilitates tracing of service to service calls, can be used to report latency
  - Nearly complete in core services, will need similar changes in device-sdk
- **NO** Core WG Call Tomorrow

Applications WG Update (08-Jan-19)

- After comparing OpenFaaS and Nuclio, team came to conclusion that the deployment and performance are not designed for the Edge, however we really like the features.
- Over the next weeks we will examine if it is reasonable to develop the EdgeX Application framework which will enable us to have functionality similar to Serverless but on the Edge.



- Application WG face to face meeting is scheduled for January 24 and 25 2019, Boston MA
- Location: Dell EMC office (255 Main St) in Cambridge (https://www.google.com/search?client=firefox-b-1&q=255+main+street+cambridge+ma#)
- Contact me or Jim White if you want to attend.

Device Services WG Update (23-1-19)

- Go SDK
  - Updated to track database abstraction in core
- C SDK
  - SMA API added
  - Added support for shift and mask data transforms
  - Working on generic registry API
- Device Services
  - Minor updates/fixes for modbus device
- General
  - Proposed solution for floating point encoding options
  - Intel presented IP Camera device service

Test/QA WG Update (01-16-19)

- Creating document describing steps by which EdgeX developers can setup the performance test environment and develop new test scripts
- Investigating failed blackbox test cases of
- Opened PR #13 to add more unit test for device-modbus

DevOps WG Update (01-23-19)

Several User Stories currently being worked in current sprint.

- **device-sdk-c** (WIP)
- **device-grove-c** (WIP)
  Working through the build issues with Eric Ball's help behind the scenes

- Allure Framework plugin installed on Jenkins build infrastructure - QA /Test reporting
  - Plan to start work on integration of the Allure reporting
- Explore kicked off related to new tooling that supports code coverage / testing as well as TIG stack
  Looking at Codecov.io and SonarQube
  TIG stack requires dedicated LF infrastructure to host Grafana
- Go Module POC (WIP)

Security WG Update (01-16-19)

- Documentation work:
  - Secret store near completion
- Finalize HW Secure Storage design document today
  - Coding can begin next.
- Automated testing design has begun

System Management WG Update (1-23-19)

- Start/stop/restart wrapped up
- Next tasks
  - Go & C SDK (and device services) incorporation work to be done
  - Add CPU usage metrics (in addition to memory usage metrics)
  - Add health/status check of the services to the SMA
  - Stretch goal – provide a translation layer (with abstraction) to offer SMA API via other protocol (like LWM2M, SNMP, etc.)

Developer Outreach (01-23-19)

- EdgeX Community DevKit Demo
  - Deep-dive Tech Talk next Friday
- New Poll option in Zoom
- Archiving Slack conversations
- Agreed on docs naming workaround

Certification Work Group (Proposed)

Keith Steele

Certification WG

Proposed WG Charter

• Define and document what elements of EdgeX can be certified.

• Define and document the process of EdgeX certification; namely what steps parties wishing to certify an element must go through and the success criteria in each step in order to achieve certification.

• Build and manage any evaluation tools or automation associated to the certification process

• In consult with the EdgeX marketing work group, communicate and promote EdgeX certification

• On behalf of the EdgeX TSC, officially certify elements and bestow the privileges of that certification (example: authorized the use of the EdgeX Certified label)

• On behalf of the EdgeX TSC, manage the certification process including requests, renewals, revocation, and maintaining a list of certified elements

TSC Votes

To create the new Certification Work Group under the LF EdgeX Foundry project under the defined charter

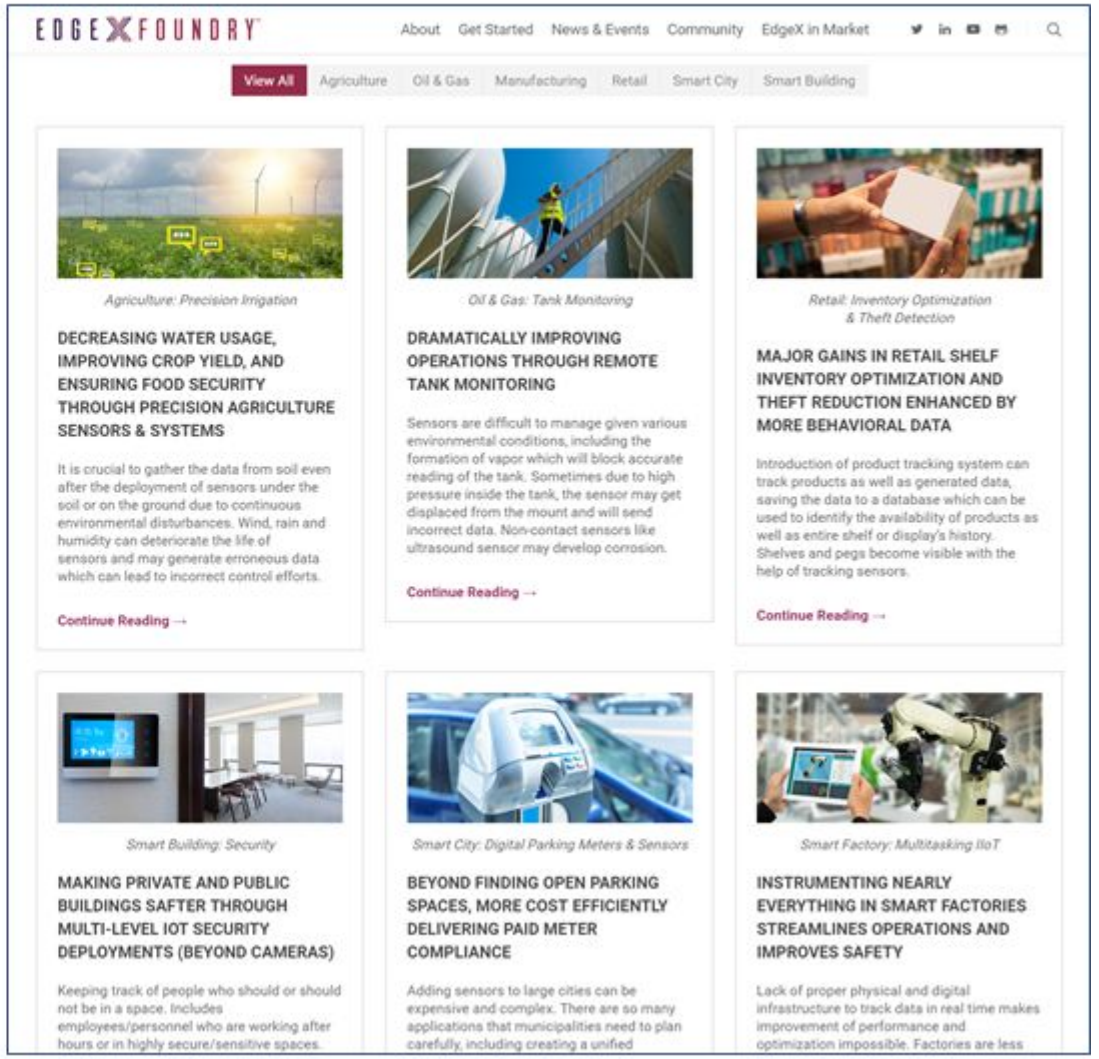
To approve of Randy Thompson (Dell) as its WG chairman for the remainder of this EdgeX TSC term (June 2019)

Dev Kit Demo

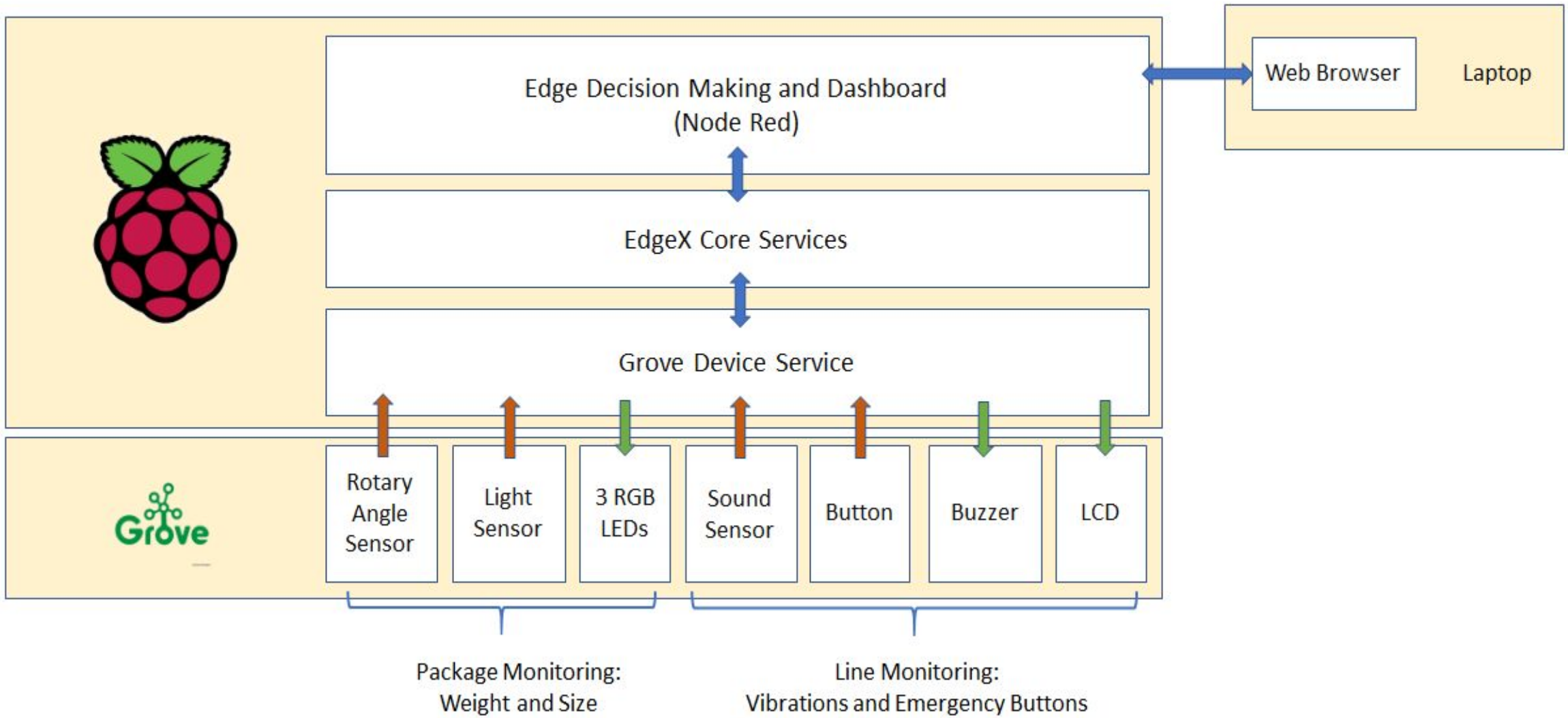
James Butcher IOTech

EdgeX Dev Kit Scenarios

- DevKits are for sketching out Edge IoT PoCs
- Need to be able to represents real use cases
- Verify concepts and then transition to real/industrial devices
- EdgeX Foundry Website has some candidate use cases
  - Should provide ideas and possible scenarios
- 1st effort initially focused on Smart Factory
  - Package Monitoring
  - Production Line Monitoring

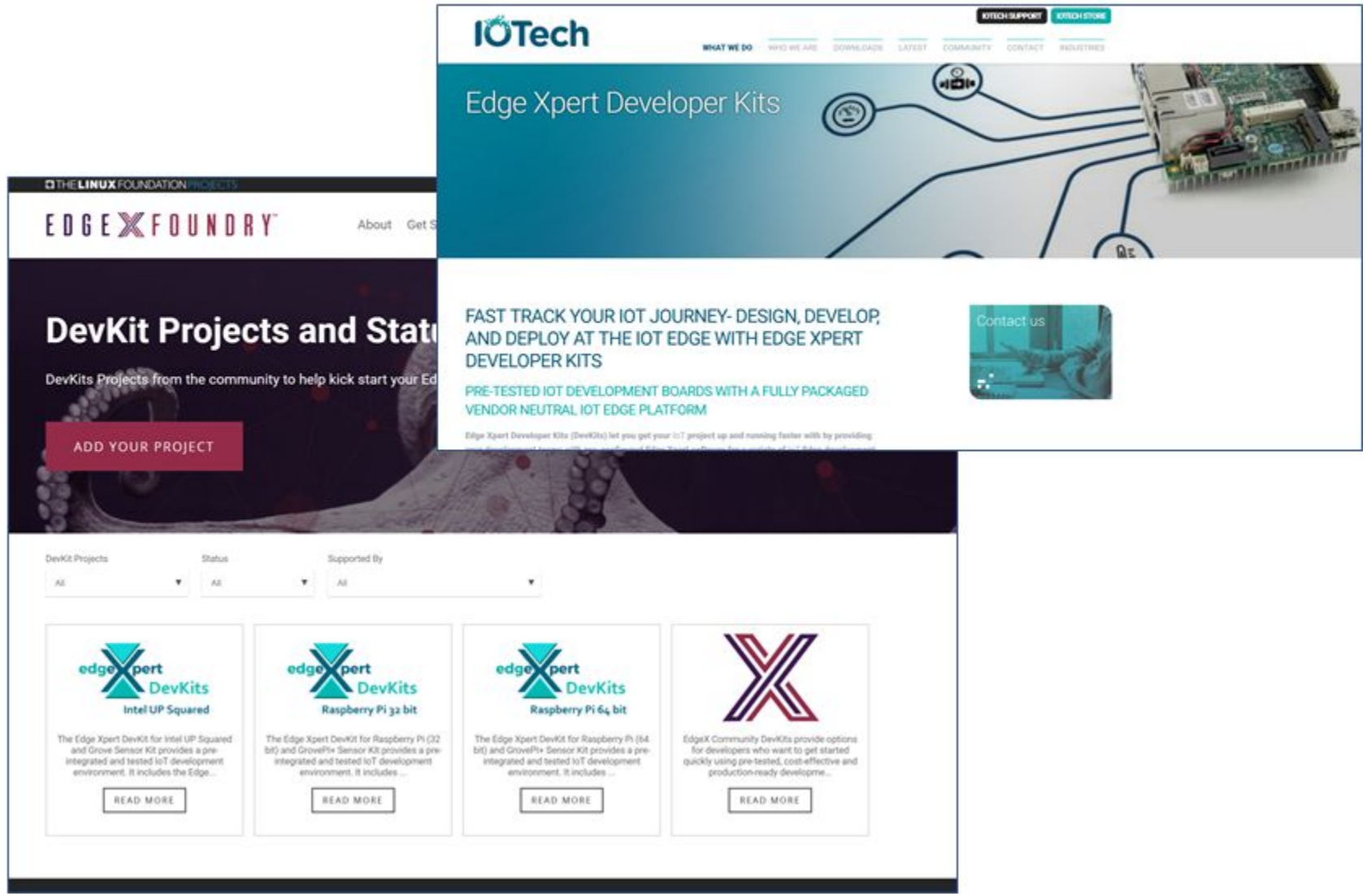


Sample Demo Architecture – Smart Factory



Following On

- More DevKits (different targets) and more sensors
- Sample use cases for different industries
  - Ideas please….?
- Blogs/Videos
- Tutorials



EdgeX TSC F2F Meetings

EdgeX TSC F2F Meeting(s)

- **29 April - 2 May, 2019** -- Location Seoul, South Korea -- Wiki page
  - Technical Business Discussions + EdgeX 101 on Monday, April 29
  - Architect's Day / WG Breakout Sessions + Social Event on Tuesday, April 30
  - Technical F2F - Day 1 + Dinner Reception on Wednesday, May 1
  - Technical F2F - Day 2 on Thursday, May 2
- **RSVP at https://goo.gl/forms/oMptkNU90RRxhK5g1**
  - RSVP by EOD April 12
  - Current registration count: 5 in-person; 0 dial-in
- Hotel/Travel: Information coming soon

- **October, 2019** -- Location Chandler, Arizona (USA) @ hosted by Intel

Upcoming Events

Full list of LF events available at
https://events.linuxfoundation.org/upcoming-events/

Additional EdgeX events available at
https://www.edgexfoundry.org/events/

Upcoming Events

- Emerging Computing Technology Conference, January 29-30, 2019, Houston
  - Akram Ahmad (Dell) - January 29 at 4:15 pm

- IoT Evolution Expo, January 29 - February 1, Fort Lauderdale
  - Jim White (Dell) - January 29 at 3:00 pm - Edge Computing: Remotely acting on mission-critical decisions in the field
  - Jim White (Dell) - January 31 at 12:15 pm - Addressing IoT Protocol Soup with a Dual Transformation Engine

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Upcoming CFPs

CFP Upcoming Deadlines:

- Open Source Leadership Summit , March 12-14, 2019, Half Moon Bay, CA
  - CFP Status: Closes January 28, 2019
  - https://events.linuxfoundation.org/events/open-source-leadership-summit-2019/program/cfp/

- Open Source Summit China, June 24-26, 2019 | Shanghai, China
  - CFP Status: Closes February 15, 2019
  - https://linuxfoundation.smapply.io/prog/open_source_summit_china_2019/

- Members interested in joining the EdgeX Speakers Bureau, please email pr@edgexfoundry.org

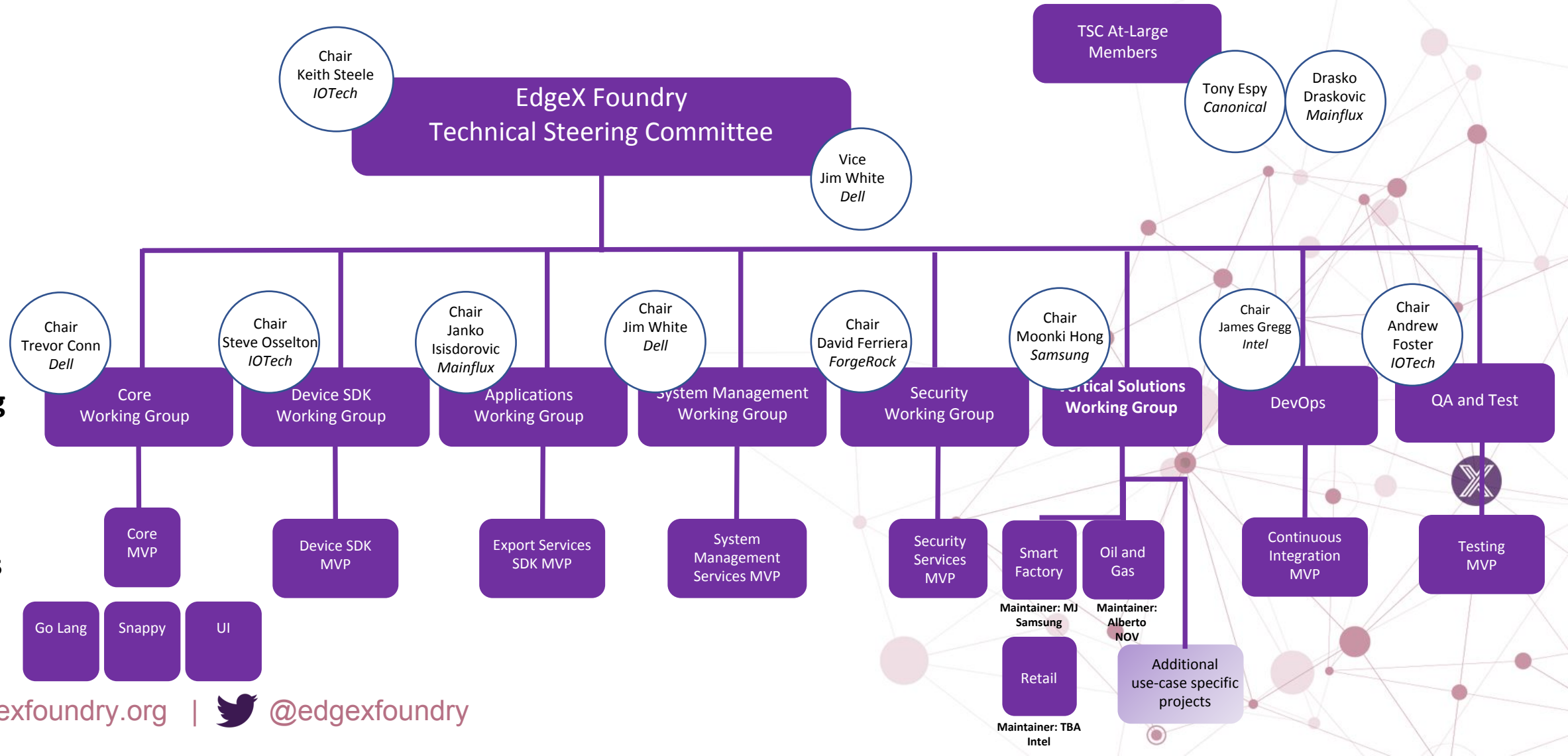
AOB / Reminders

AOB/Cadence

- Meeting Cadence Reminder
  - Currently held weekly at 7am PST on Wednesday's
  - Calls without TSC quorum will still be used to review issues

- **Next Meeting: January 30, 2019**

EdgeX Project Organization



Marketing

- **CTA:** If your company will be presenting EdgeX at an upcoming event/webinar/other, please email pr@edgexfoundry.org so that we can help promote

EdgeX in Market

- Page showcases momentum in the project, including solutions already available
- https://www.edgexfoundry.org/edgex-in-market/
- Email info@edgexfoundry.org if you have any additions

Project Contributions Welcome!

- Our objective is to make EdgeX use & deployment pervasive!
- EdgeX success is 100% dependent on the vibrancy of a proactive community
- Getting Involved
  - Project membership growing - want to join contact Brett Preston at LF (bpreston@linuxfoundation.org)
  - First Priority is the MVP - potential contributors please contact keith@iotechsys.com (people, equipment, technology)
  - If interested in adding new projects please contact the relevant working group chair

Project Resources

Quick links to most commonly used Community Resources

- Code: https://github.com/edgexfoundry
- Documentation: https://wiki.edgexfoundry.org/
- Discussion: https://chat.edgexfoundry.org/
- Mail Lists: https://lists.edgexfoundry.org/mailman/listinfo
- Twitter: https://twitter.com/EdgeXFoundry
- LinkedIn: https://www.linkedin.com/company/22298339/
- YouTube: https://www.youtube.com/c/EdgeXFoundry

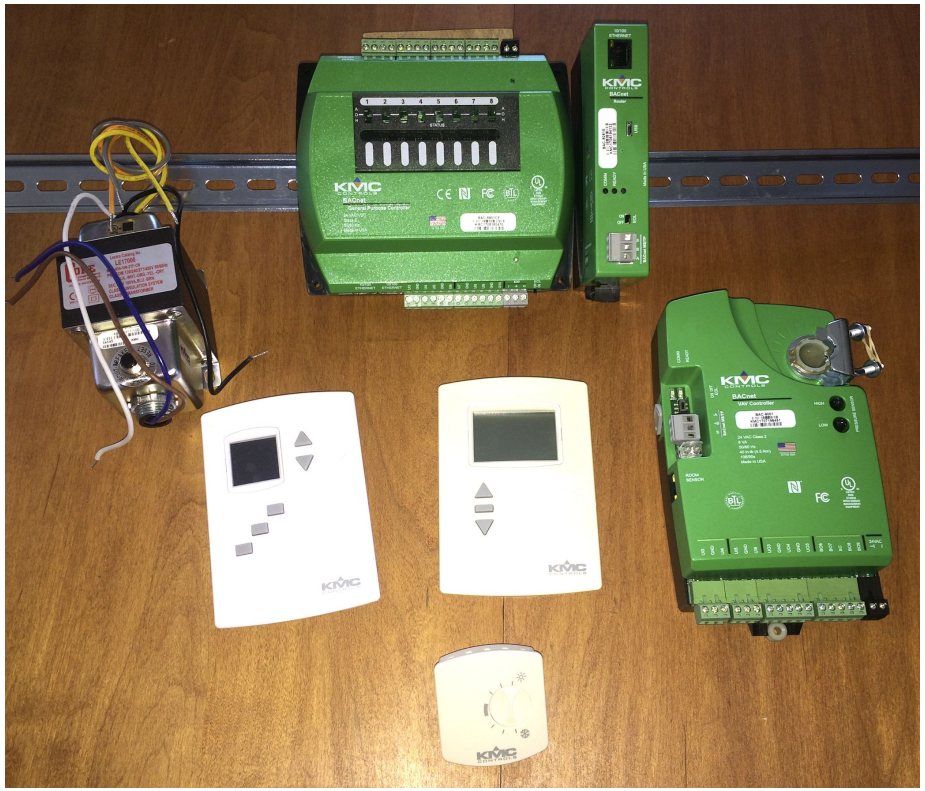
EdgeX - Where to learn more

- EdgeX Foundry Wiki
  https://wiki.edgexfoundry.org/display/FA/EdgeX+Foundry+Project+Wiki
- EdgeX Foundry Rocket Chat
  https://chat.edgexfoundry.org/home
- Weekly EXF Technical Spin up calls
  30 minute deep-dive topics followed by 30 minute open Q&A
  Call recordings are available on the Wiki

What is the Device Exchange?

- A great way to put your products in the hands of other members so they can help build a better EdgeX!
  - https://wiki.edgexfoundry.org/display/FA/Device+Exchange

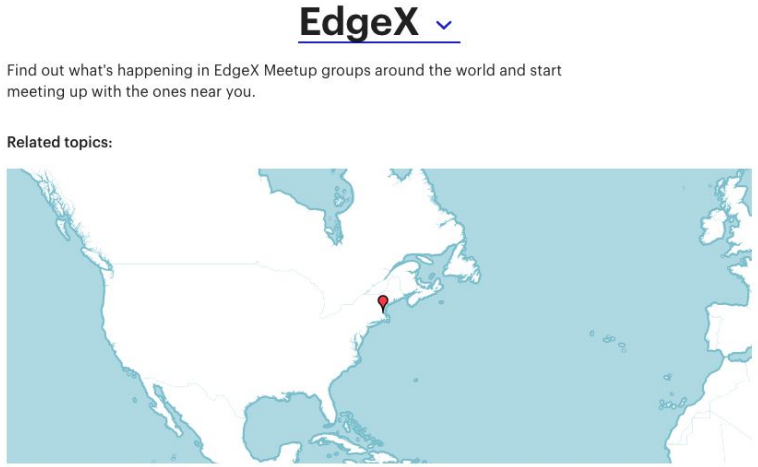
KMC CONTROLS



Special thanks to Dave Bohlman and KMC Controls for making this awesome kit and how-to guide available to members!!

Meetups

- Help us grow awareness!
- Present, and Tag, EdgeX in your local IoT Meetups
- https://www.meetup.com/topics/edgex/
- Email info@edgexfoundry.org for assistance



Meetups: Reimbursement Program

- https://wiki.edgexfoundry.org/pages/viewpage.action?pageId=7602724
- Wiki page built for the community to leverage
- Encourage community to begin introducing EdgeX in your local Meetup groups
- EdgeX Foundry will fund/sponsor the talk in which EdgeX is scheduled to be presented
  - Up to $250 for F&B, once per Meetup group, per quarter
- Let us help drive traffic to your event! Email pr@edgexfoundry.org once Meetup has been scheduled
- Post-event, please consider doing a blog about the event

Hackathons: How can you help?

- https://wiki.edgexfoundry.org/display/FA/Hackathons
- Provide any local volunteers onsite to help with technical work, potentially help judge, etc. (see list below of known hackathons coming up and locations)
- Sponsor breakfast/lunch/dinner for the participants (usually things like donuts/coffee, pizza lunch or cater sandwiches)
- Sponsor $ rewards (incentives) for teams that successfully implement projects (these could even be projects that particular sponsors want to see accomplished - we just need them scoped appropriately so as to be something that can be accomplished in a 2 day period)
- Help provide or resource hackathon winner prizes
- Sponsor or provide any swag (t-shirts, mugs, etc.)
- Provide marketing assistance

Thank You