Celtic-Plus Event
28-29 April 2016, Stockholm

# IoT Device Connectivity Platform
## A better way to manage "Things"

*Dr. C. Paul Slaby*
*pslaby@teslonix.com*

1

**How do we connect and manage billions of "things" (IoT)?**

These "things" are IoT edge devices (sensors, RFID tags, wearables, etc.,) which need to be powered, connected, located, identified, tracked and communicated with.

# We need a better way to manage "things" (IoT)

Technology efficiently linking billions of "things" which interface us to the physical world:

- Enable passive / low-power devices by removing the need for batteries
- Provide IoT device management to create efficient low-power IoT networks
- Provide contextual, localization and state-awareness layers
- Offer long-range connectivity while reducing infrastructure costs

**Why should you participate in my proposal?**

- Development partners gain **access** to a **huge new business opportunity** based on cutting edge technology that makes mass deployment of passive IoT nodes possible
- Opportunity to develop **new** specialized hardware **products**, software products and platforms addressing IoT-device specific security concerns, analytics and management issues

# Organisation Profile

Teslonix is a technology company specializing in wireless power systems using RF-based energy transfer.

- Inventor of smartRFpower™

- 8 patents pending

- Strong in-house R&D expertise in wireless systems development

- Strong research organizations and university linkages

- Partnerships with leading IoT players

www.teslonix.com

# Proposal Introduction (1)

Development of **IoT Device Connectivity Platform** enabling efficient linking of billions of "things" interfacing with the physical world around us to the Internet while taking care of power, context, 3D location, tracking and communication.

- Develop IoT reader/interrogator system
- Develop passive sensors that take full advantage of all smartRFpower™ capabilities
- Develop new software layer to facilitate management and communication between system and nodes
- Design products for specific application and markets (i.e. Smart Cities, Smart Parking, Smart Security, etc.)
- Implement smartRFpower as a way of energizing passive electronics devices or charging active devices thus reducing the need for batteries, their replacement and maintenance
- Make mass IoT deployments possible by bringing active node functionality using more affordable passive electronic devices

## Build a better way to manage "things" (IoT)

# Proposal Introduction (2)

**Expected outcome**

**IoT Device Platform** bundling infrastructure components into a single product including: low-level device control and operations (power, management, security, communications), data acquisition & management with hooks to IoT application development

**Impacts**

- Opens mass IoT deployments
- Offers new functionality more effective in powering, locating, tracking and communicating with nodes in smart application deployments
- An economic solution permitting massive deployments of billions of IoT nodes

**Schedule**

- Consortium in place Q3/2016
- System architecture Q1/2017
- Prototypes Q3/2017
- Commercial availability 2018

# Partners

Looking for partners interested in jointly developing IoT device solutions that bridge software and the physical environment; also partners developing technology capabilities to fit a specific market application

**Initial partnership talks involve:**

- Electronic component manufacturer (global - Germany, Austria, Holland)
- Integrated sensor vendor (Spain)
- Teslonix (Canada) - initiating partner
- A couple of research institutions and universities

**Profile, expertise and type of partners we are looking for:**

- Semiconductor vendor with capabilities of on-chip integration, design, manufacturing and supply
- Integrated sensor/RFID developer
- IoT Software platform expertise
- Partners with RTLS hardware expertise

# Contact Info

For more information and for interest to participate please contact:

- Dr. C. Paul Slaby
- [pslaby@teslonix.com](mailto:pslaby@teslonix.com)
- +1 613 699 1485
- Teslonix Inc.
  320 March Rd. Suite 400
  Ottawa, ON K2K 2E3
  Canada
  www.teslonix.com