ESB - Procurement Strategy

Summary

This document outlines a potential strategy for IOTSF focussing technically and commercially on the procurement of IOT devices.

Specifically, the proposal will look at how existing IOTSF assets (assurance framework/ best practices etc) can be used practically at the point of procurement, demonstrating real commercial value to "members", and hopefully

1. Increase potential membership
2. Increase opportunity to "pay for" valued aspects of membership

Commercial considerations

Example JOSCAR

NQM has recently joined JOSCAR (https://hellios.com/joscar) a for profit member organisation

Strapline

> ***The Power of Collaboration:***
> ***10 Years of streamlining supply chain data***
> ***Join the community of buying organisations in the UK working together to confidently manage their supply chain data.***

It serves the defence (and finance) industry. Both industries are characterised by a few number of large "purchasers" (primes) but a complex diversified supply chain

Both markets are heavily regulated, with long supplier approval processes

Both markets want to "innovate" but are often hampered by their complex supply chain processes.

The membership has two primary tiers: buyer vs seller

Both benefit from streamlined process

The fundamental benefits are:

1. Supplier registers key credentials once on the single platform (rather then many different procurement portals)
2. Buyers have access to prequalified suppliers

Both have fundamentally reduced administration and hopefully higher quality qualification process.

Security related considerations work well in this model as it tends to be less differentiated.

OMTP

OMTP https://en.wikipedia.org/wiki/Open_Mobile_Terminal_Platform was initially setup to solve a similar issue in the mobile sector. Buyers being mobile telcos.

Similarly it was fundamentally an alignment of requirements (usually security related) , moving toward "shared" requirements documents and eventually shared compliance statements.

Again the benefits were assumed to be: a) reduced administration for both parties b) higher quality specifications

Regulation vs supplier requirements

Supplier requirements and regulatory requirements should be seen along a continuum.

There is usually a "market" before the market is regulated

The market usually self regulates, through consensus and alignment before regulation is triggered.

There is much greater opportunity to differentiation and innovate before regulations

Regulatory compliance is the "bottom feeder" of the compliance/assurance pipeline. It is a point of last resort and the result is usually binary - you either comply or don't - and if the regulation is hard - you have a business or not. It's much harder to add value at this stage.

Who pays

In a procurement focussed membership there is an asymmetric value proposition. The cost/ value is borne primarily by the large "purchasers" and the smaller innovative suppliers tend to be partially subsidised.

Technical considerations

Two sided

Technically there are typically two sides to the proposition

1. The requirement
2. The proof of compliance

The assurance frameworks follows that model

The assurance frameworks can be adapted to map to multiple "requirement subsets" - these could be different regional regulations of local requirements

The assurance framework can be theoretically extended

Other best practices can also fall into this model – e.g. AI best practice

Proof ecosystems

How do you know you comply with the requirements?

There are several models

1. Supplier self certifies
2. The non profit audits
3. The non profit qualifies testers/auditor to certify
4. One or more purchasers can certify

Commercially would strongly recommend we restrict considerations to point 1 initially

But creating a testing ecosystem, generates a whole new potential business model

Technically we strongly recommend use of Verifiable Credential as evidence. It opens things up to much more sophisticated exchanges

Topologies - who sees what

There are many ways of exchanging evidence between supplier and purchaser.

The non profit can always be the intermediary. Or the buyer and seller can exchange information bilaterally without an intermediary, as long as the requirements are specified

We would recommend that

1. A supplier always registers with non profit that the compliance statement exists
2. It is optional whether the statement is hosted by supplier or IOTSF (an extra hosting service) - but a method of access must b advertised

Device type

Essentially it is device type that is certified.

One side effect of registration of compliance is that a new device type is formally registered and a device type identity is issued

This is an additional value

You can make a reliable statement of compliance with a device type identifier

Possibly controlled access to a block chain??? (see Matter)

Device identity

This problem does touch on the device identity discussion

Ideally a device identity needs a device type mapping.

And if you have the device type you know what "assurances" it carries.

This is how you solve the practical problem - does the device in my hand or on the network comply with XYZ.

Commercial model

What does this mean practically re IOTSF.

Initial suggestions

1. Create buyer and seller membership tiers with clear value proposition
2. Focus initially on assurance framework - but extendable later
3. Suppliers can
    a. Register their company (there's a lot of value here even before we get into product re company "assurances")
    b. Register their product: (device type)
        i. This issues a unique identity
        ii. And one or more "assurance" statements can be tied to the product
4. Buyers can
    a. Access the registry of buyers and products
    b. Validate whether their products comply
    c. Can integrate requirements and validation system with their procurement methods
    d. Create requirement extensions for their own proprietary requirements
    e. Collaborate with your buyers on new collaborative requirements

The regular set of requirements e.g. PSTI can set as a reductive minimal set in this

What needs doing

1. Sense check with board
2. Sense check with exemplar buyers and seller tiers
3. Define MVP features
4. Estimate effort to create (this may require investment)

This model can be circulated with government stakeholders as a method of supporting

labelling/ etc