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On Farm Connectivity Program Feedback for Round 3

Hello Team.

Whilst I have provided some feedback already, I would like to provide more detail to a small number of specific issues.

4.1 Communication

My thoughts here are that four weeks is an appropriate amount of time on two grounds:

- For any given announcement data there will be a significant portion of the agricultural community unable to drop tools and concentrate on paperwork for a number of weeks. They need reasonable time to collaborate with suppliers.
- If the time period is too short is merely results in pro-announcement canvassing of farmers who will be preparing submissions ahead of time so that they can flood Day One for submissions.

There is no doubt that the new process will encourage prospective suppliers to approach farmers in advance and actively coach them on their submissions. Traditionally this was the province of brokers and consultants but now this is morphing over to the suppliers.

4.2.1 How will it Work

There is no doubt that this will scare off a range of farmers but given the projects are generally small, it is likely that the farmers will do deals with their suppliers. However, my expectation is that this will produce a far more honest result because it means that participants are convinced the solution will be worth the trouble.

4.3.1 What is in Scope

Overall, I think the two tables are reasonably clear and inclusive, but I would like to expand on two things.

- Technology – I don't think it would hurt to include a section on protocols. Sensors do not usually connect to or talk to modems or the ethernet directly. Some might but the majority do not. There are three general protocols in use:
    - Modbus – This is a traditional protocol: TCP or RTU but normally, some kind of PLC or equivalent is required to read that protocol, not directly a modem.
    - IO-Link – This is a newer and increasingly common open-source protocol
    - Ethernet Modules – these are field bus devices that often offer all three protocol options.

- Connectivity Extension Devices – This is where we often find devices that aggregate protocol-enabled sensors and devices or connect in things like solar inverters, generators, and the growing army of VFDs (drives). These devices are required to connect the real-world device to the protocol-enabled modem. Their cost is like modems ($600 - $1200) and usually, several are needed. There are a few manufacturers but I can give you some examples from IFM Effector (so you can look these up in Google):
    - AL1350 – IP-Link Master
    - AL4024 – Field bus Ethernet module
    - AL2301 – Protocol aggregator – IO-Link converter

There are other similar devices but I mention them because they are known as modems but they are needed to complete the connectivity framework.

4.3.2 What is Not in Scope

Question 3 of "what we want to Know" – the farmer will almost always seek assistance from the supplier and that is only going to arise from supplier marketing. I think this should be expected but I don't how else you would manage application efficacy and quality. The supplier is likely help ensure the application is viable. If suppliers do not do this, your work will be too great assessing suitability after the fact. When you had an approved list of hard, your job is a lot easier.

Question 4 – this is the most difficult aspect. In the four weeks for application there is little time for the farmer to find suppliers to solve his connectivity issues. Without an advisory list, where do they start? It will be very difficult to find and assess options, often for technology they do not understand themselves.

Again, the answer is most likely that prospective suppliers will market their options to farmers well in advance of the submission open date. I am not sure that I see it working any other way but I not think this is negative. You need carefully considered and designed solutions offered to farmers and the outcomes need to be genuinely meaningful. That kind of process cannot happen in two weeks.

4.4 Packaging Impact

This new set of Round Scoping requirements will dramatically alter the way we package and promote solutions, but I think for the better. Already we have seen benefit from pulling all the connectivity components out of an automation or monitoring solution as a separate package because mostly, those costs are unavoidable. It is the range of sensors and devices that are always variable, including those already on the farm.

We see significant benefit formally separating the two. It is easier to explain and easier to justify under program aims. It means that the farmer will pay a little more than for previous rounds for sensing devices but it takes away the dubious issue of devices included because connectivity now exists.

4.5 Pricing

This is an interesting approach and I suspect you will give yourselves a headache in assessing the equipment we probably want to offer. Until we see Attachment A (not available in the discussion paper), it is difficult to comment. But I think your team needs to be aware of technology capping based on price. For example, multi-port devices are dearer per unit than single port devices but you use fewer of them per solution.

I would still favour sending in a list of equipment (which will now be dramatically smaller than for earlier rounds) and gain pre-approval that we fit the criteria. It would significantly reduce your application review time.

4.6 Geotagging

I have nothing against this concept but wonder if you might gain some benefit of building up a small library of photographed installations anyway. It might help build a sample set of use cases. Not for marketing purposes but for future educative purposes in showing farmers what some of the peers have achieved with connectivity technology.

The rest is good and a welcome change to governance. We look forward to Appendix A so that we can assess device/price categories.

Regards,

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