

Telecommunications in the Mid West - What's happening!

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What we do

- Digital and Communications Strategy for the MW Region
- Identify “transformational” projects
- Connect the players who can make things happen
- Assist as appropriate to build Business Cases that identify and source funding for projects



Strategy Development

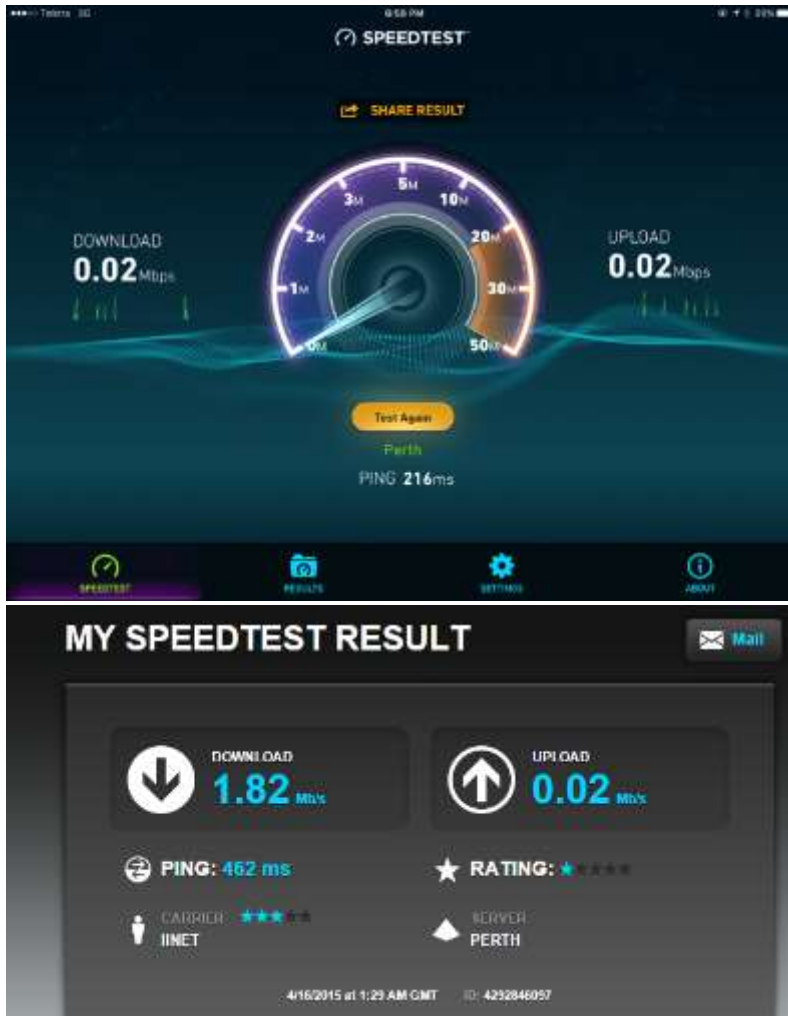


Principles

- Nothing happens without infrastructure
- Nothing changes without education
- Nothing works without tech support



Not Good Enough!



What's important

1. Comms networks must be accessible, affordable, reliable and *useable*.
2. Another mobile phone tower is not always the solution to communications connectivity issues.
3. BACKHAUL is critical
4. Private fixed wireless networks will increasingly play a bigger role in regions

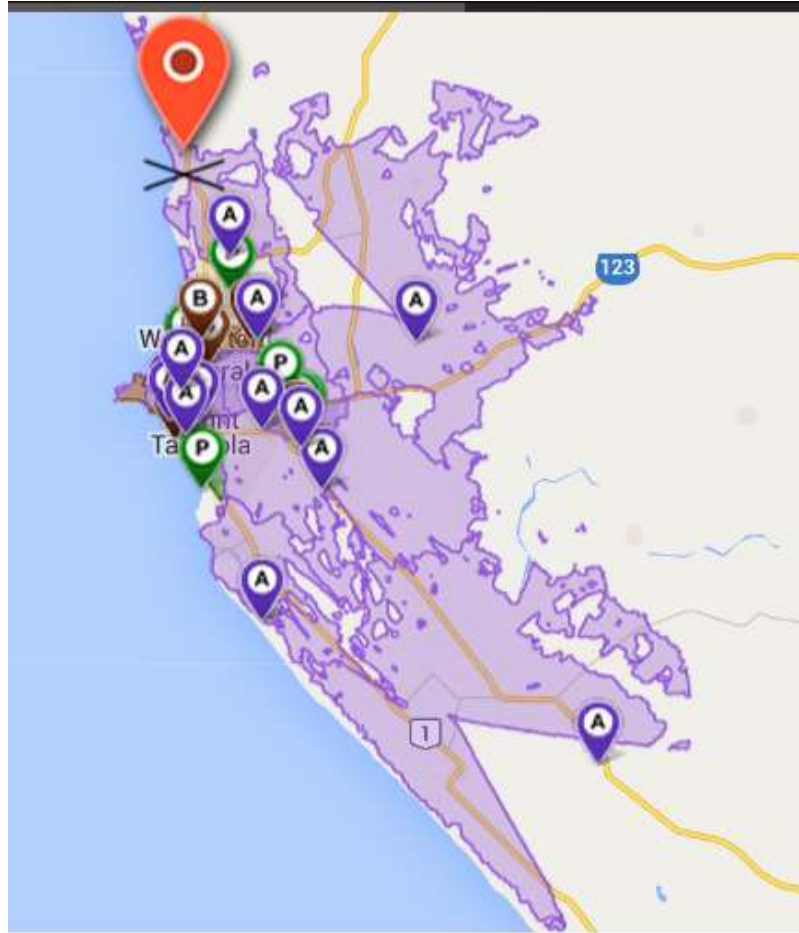


So, what's happening in the MW?

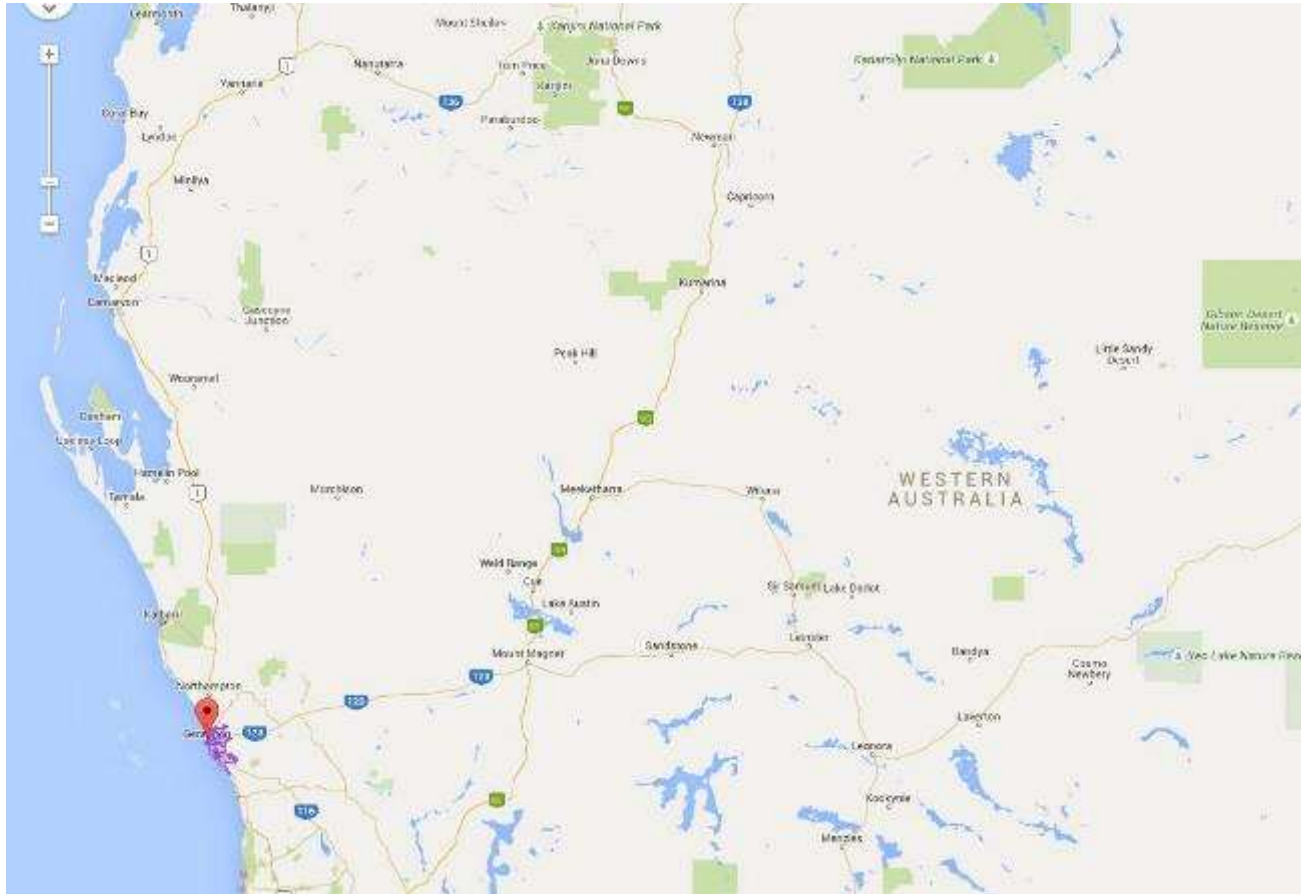
- NBN (Now “*nbn*™”)
 - FttP, FttN, FW and Sky Muster
- Infrastructure:
 - Mobile Black Spots, Round 1
 - Mobile Black Spots, Round 2
 - Fixed Wireless Pilots
- Capability
 - Applications:
 - Origo pilot with Yuna Farmers



Geraldton nbn coverage



Mid West nbn coverage



The role of the nbn

- Primarily a residential service
- Will not provide all solutions for everyone
- Some inherent limitations
- SkyMuster satellite
 - what it is
 - what it isn't



Sky Muster

LTS Coverage



Remote Islands covered by LTS:

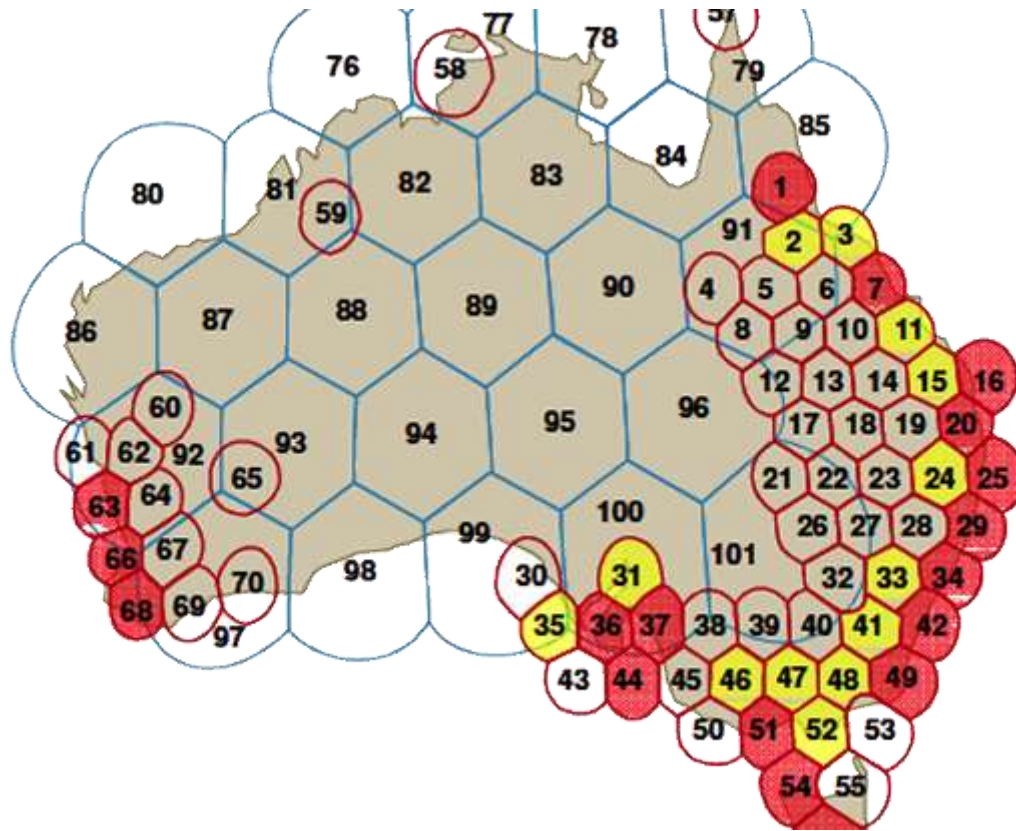
- Abrolhos Island
- Bass Strait Islands
- Bathurst and Melville Islands
- Cocos Island
- Christmas Islands
- Kangaroo Island
- Lord Howe
- Macquarie Island
- Norfolk Island
- Rottneet Island
- Tiwi Islands

Note: The Australian territories in Antarctica are not covered



SkyMuster

Anticipated congestion



Mobile phone coverage



New Telstra mobile towers



When there's no mobile phone tower nearby



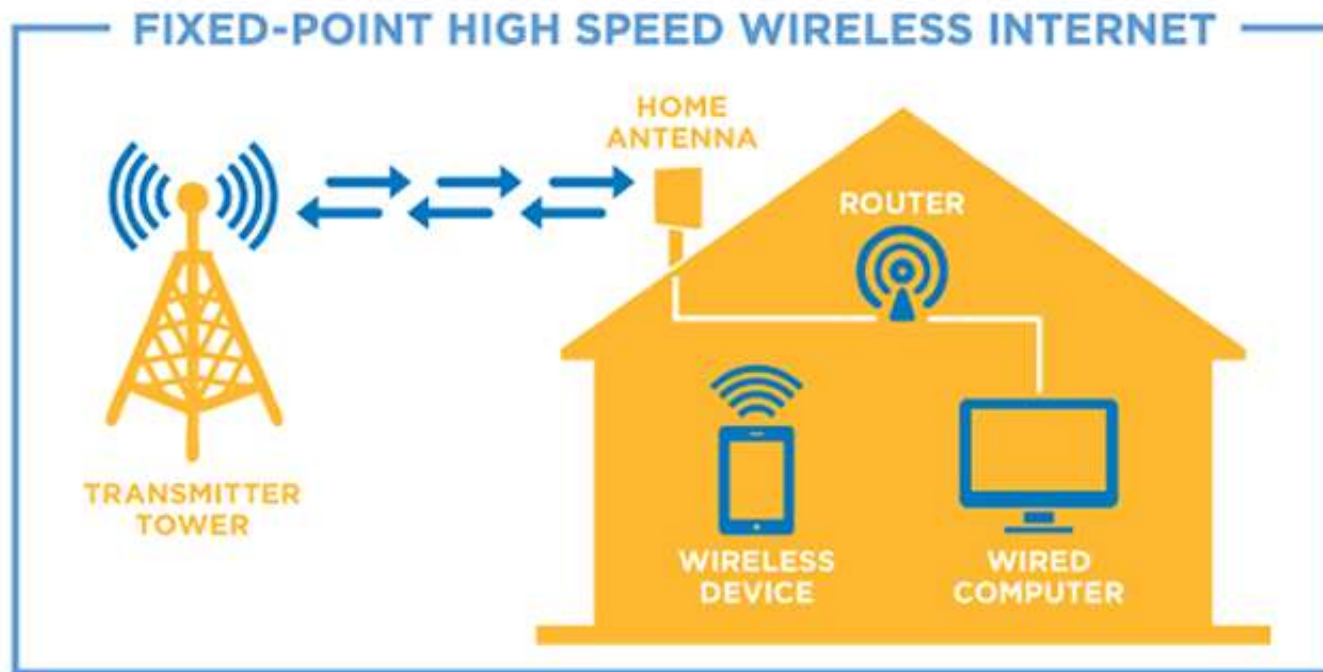
Alternatives to mobile towers

- Mobile phone coverage is not essential; if you have other options available
- Fixed wireless
- Satellite – Polar, LEO, MEO
- LoRaWAN
- More spectrum being allocated for Internet of Things globally



NORTH MIDLANDS FIXED WIRELESS BACKHAUL

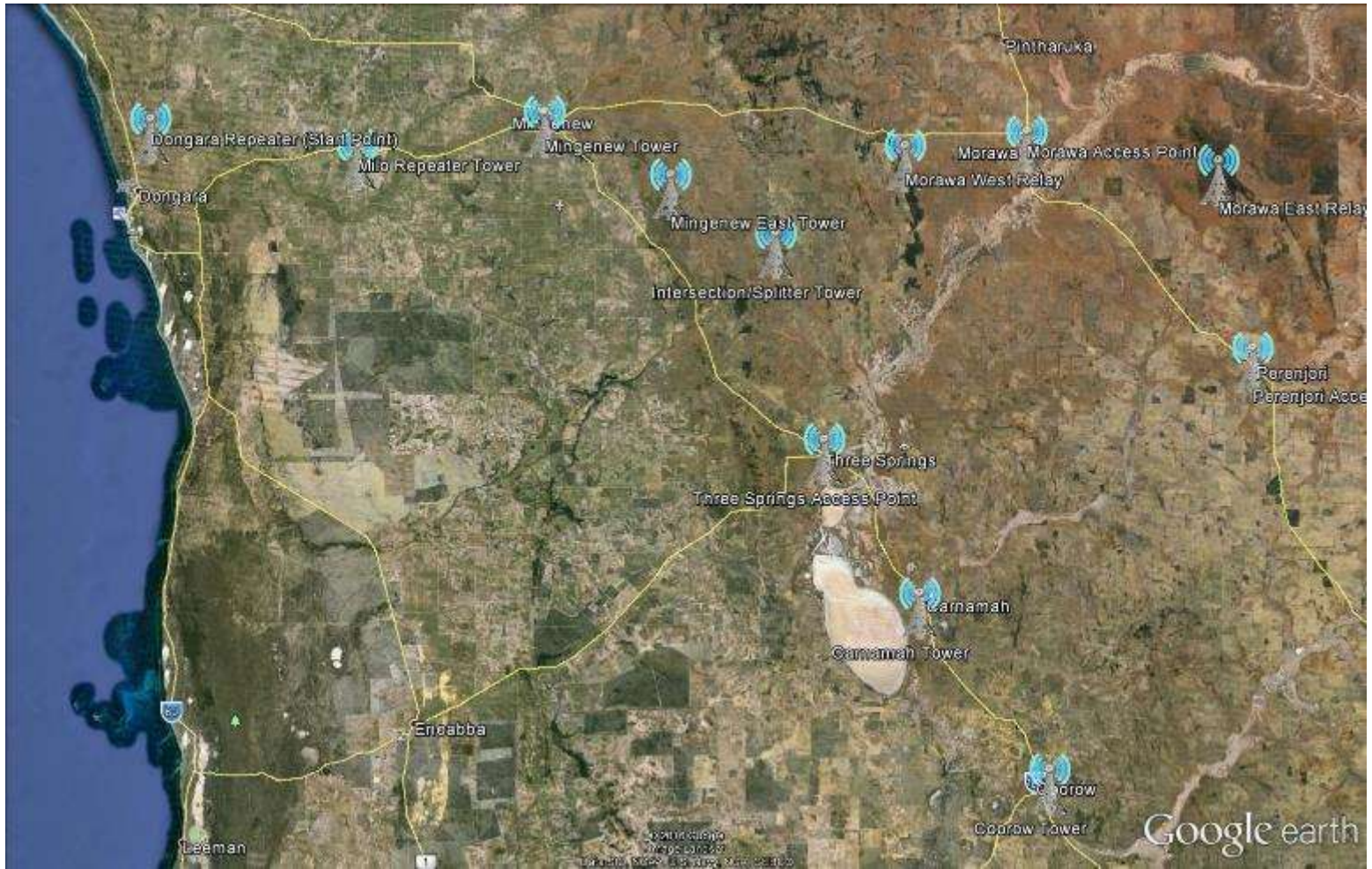
“Connecting everyone to everything”



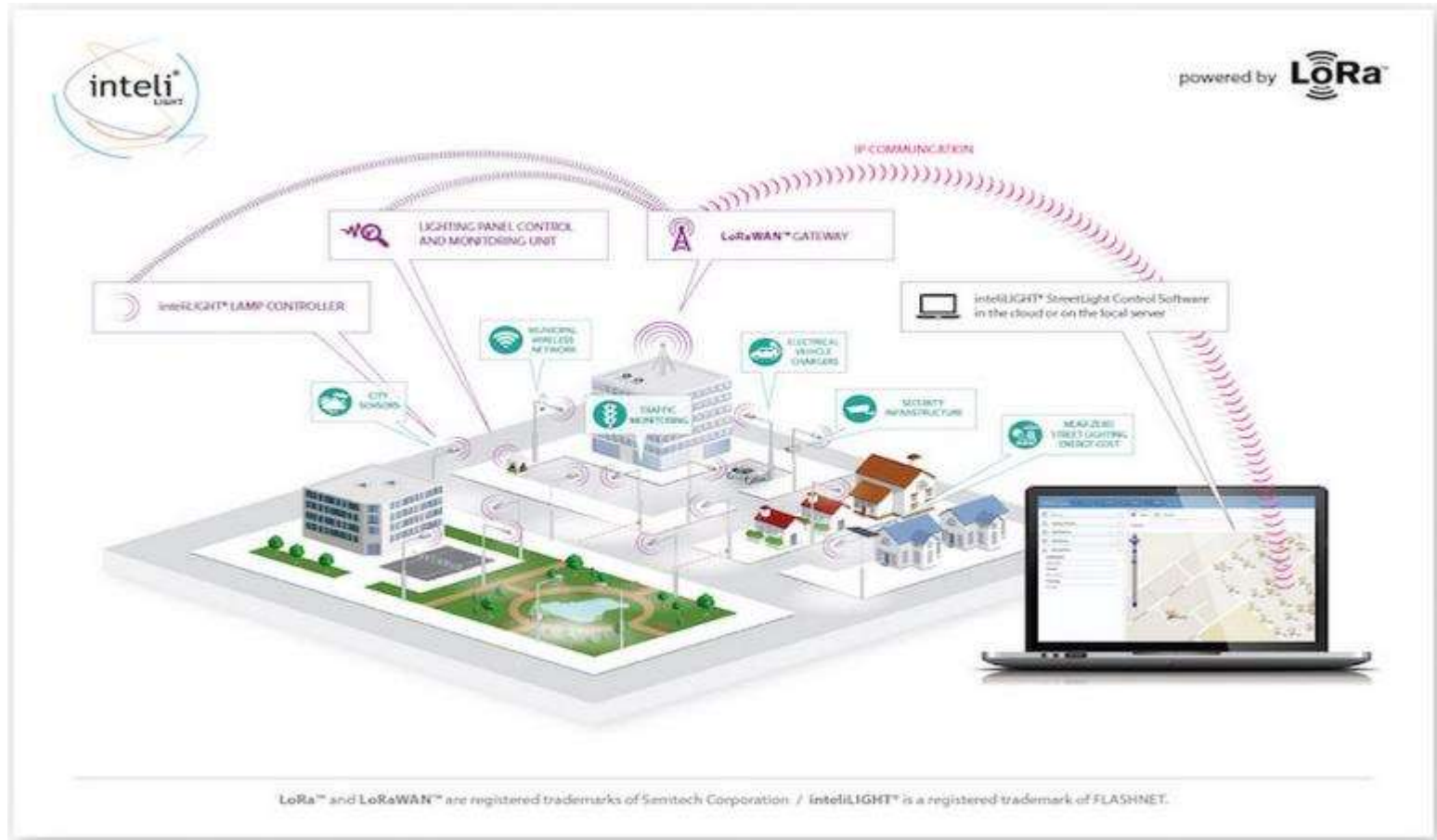
Fixed Wireless links



Backhaul



Latest buzzword phrase: “The Internet of Things”



Smart Farming

- Open source standards, so everyone's gear can communicate seamlessly
- Seamless transfer of data from sensor to analytics to reporting and recommending
- Internet of Things for Precision Ag
 - Inexpensive sensors, uplinks
 - Low data rates
 - Satellite links as an option of last resort



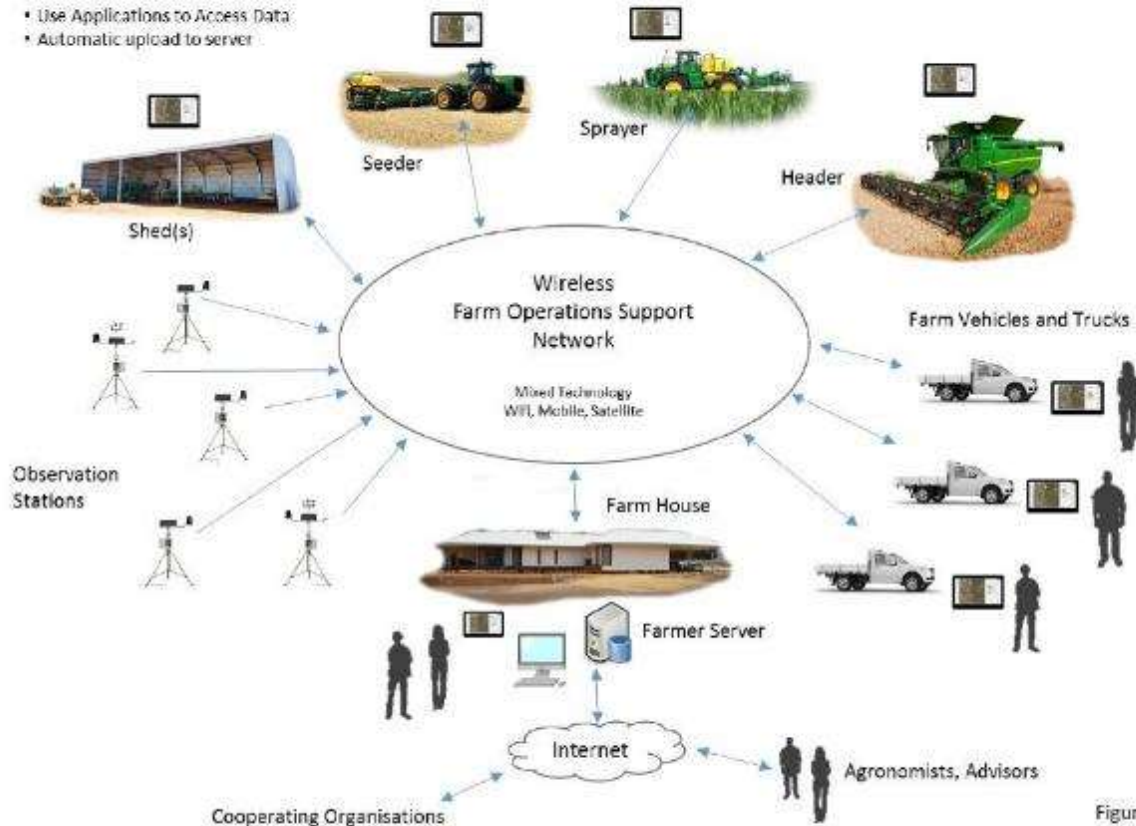
Origo Pilot Project

- More cost-efficient, economic workflow
- Next step: how to tap big data
 1. Connect the machines via open source
 2. Collect data from machinery
 3. Automate the collection/analysis process
 4. Dashboards to monitor, analyze and improve decision-making with minimal intervention.

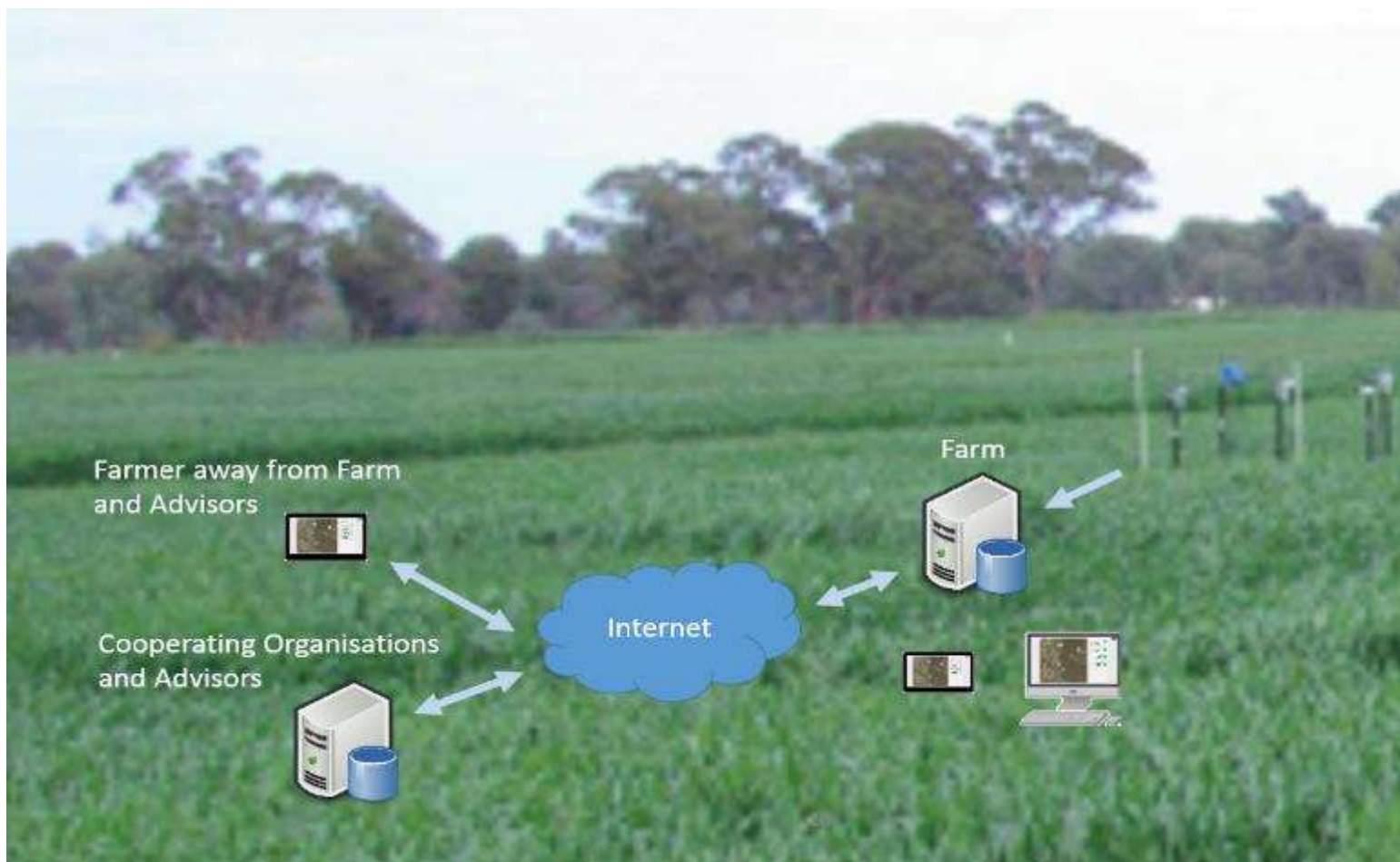


System Architecture (Origo)

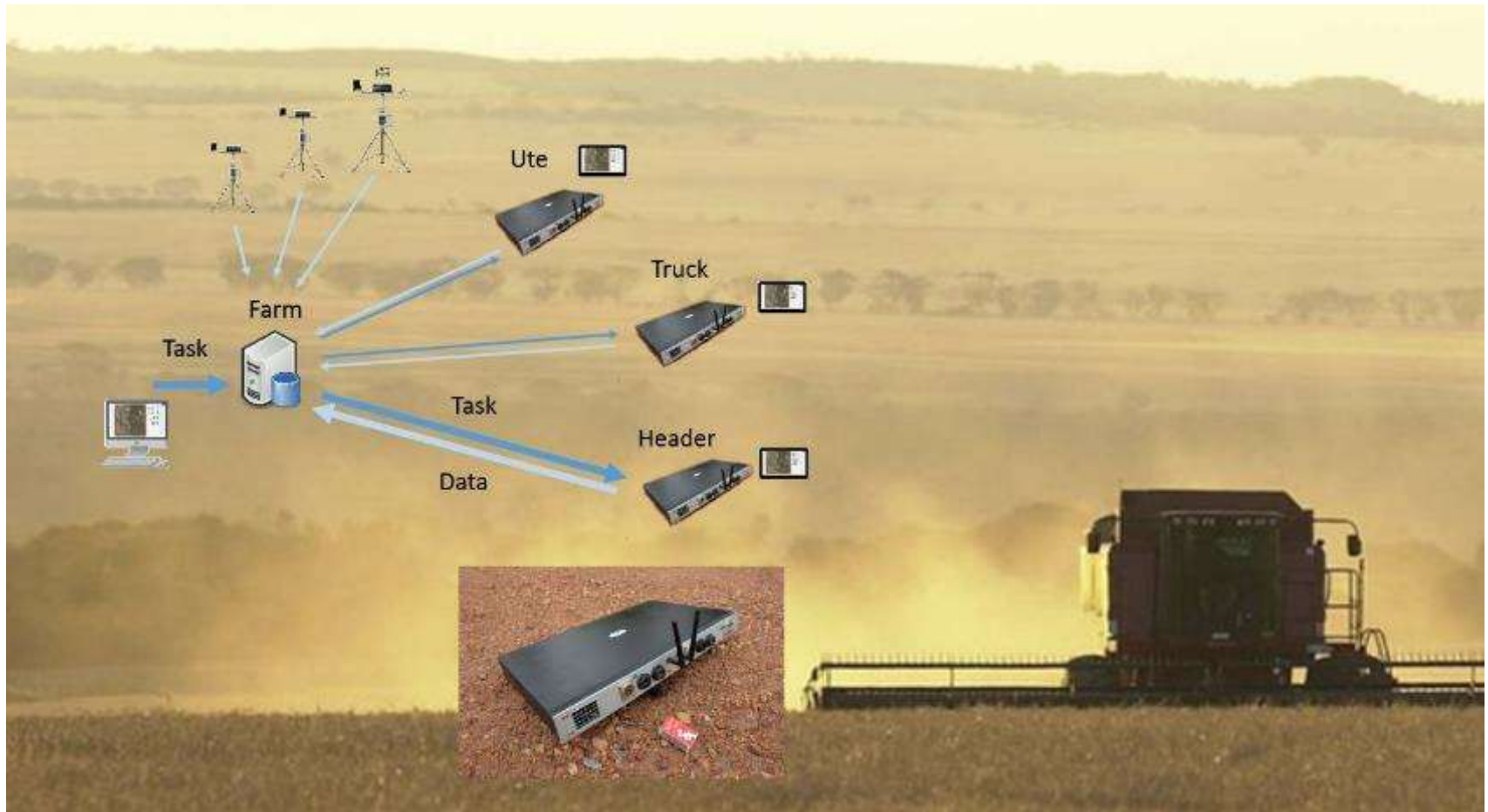
Draft Overview of Agriculture Field Operations Support Network and Data Flow



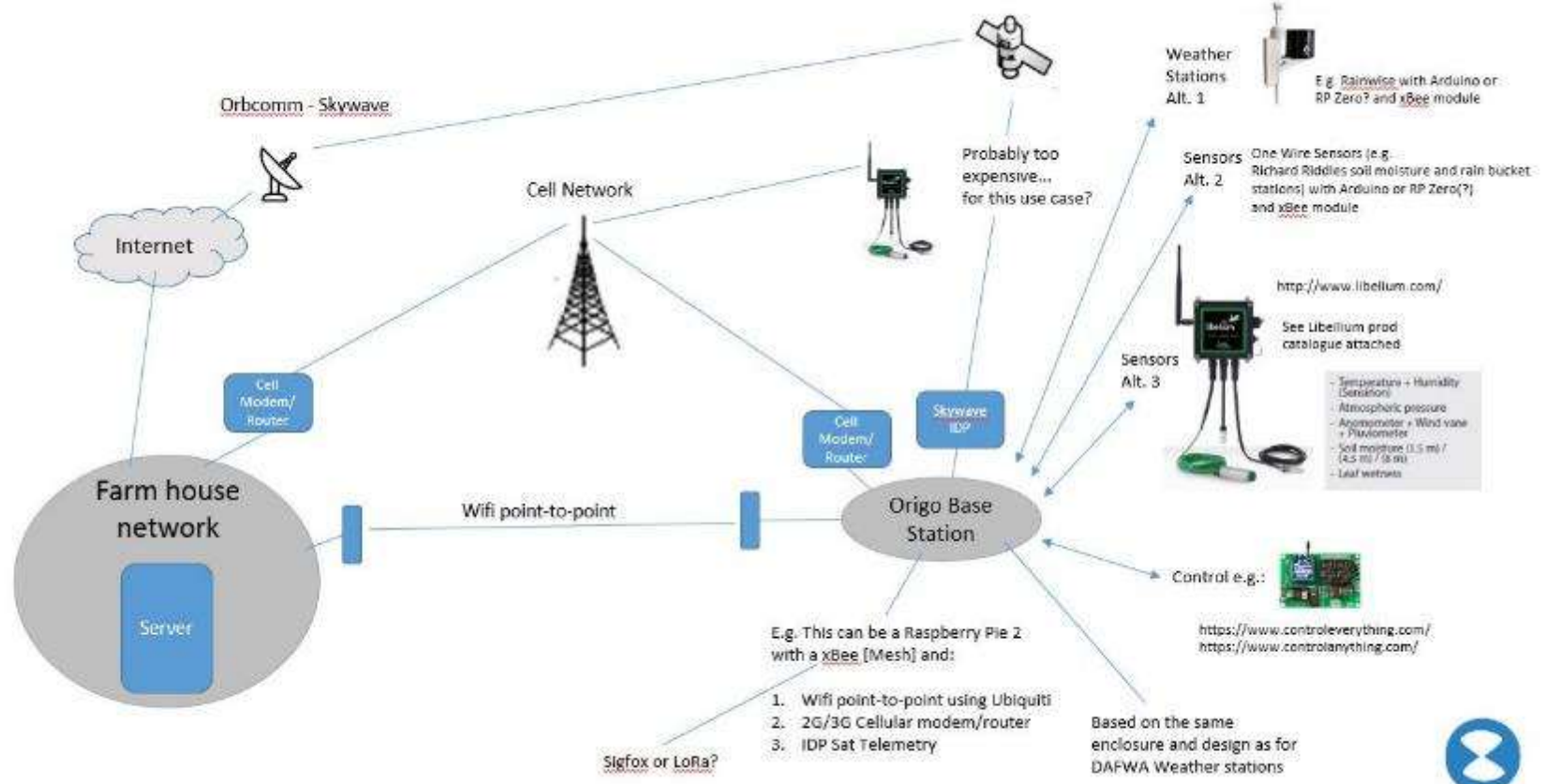
Field data collection and sharing



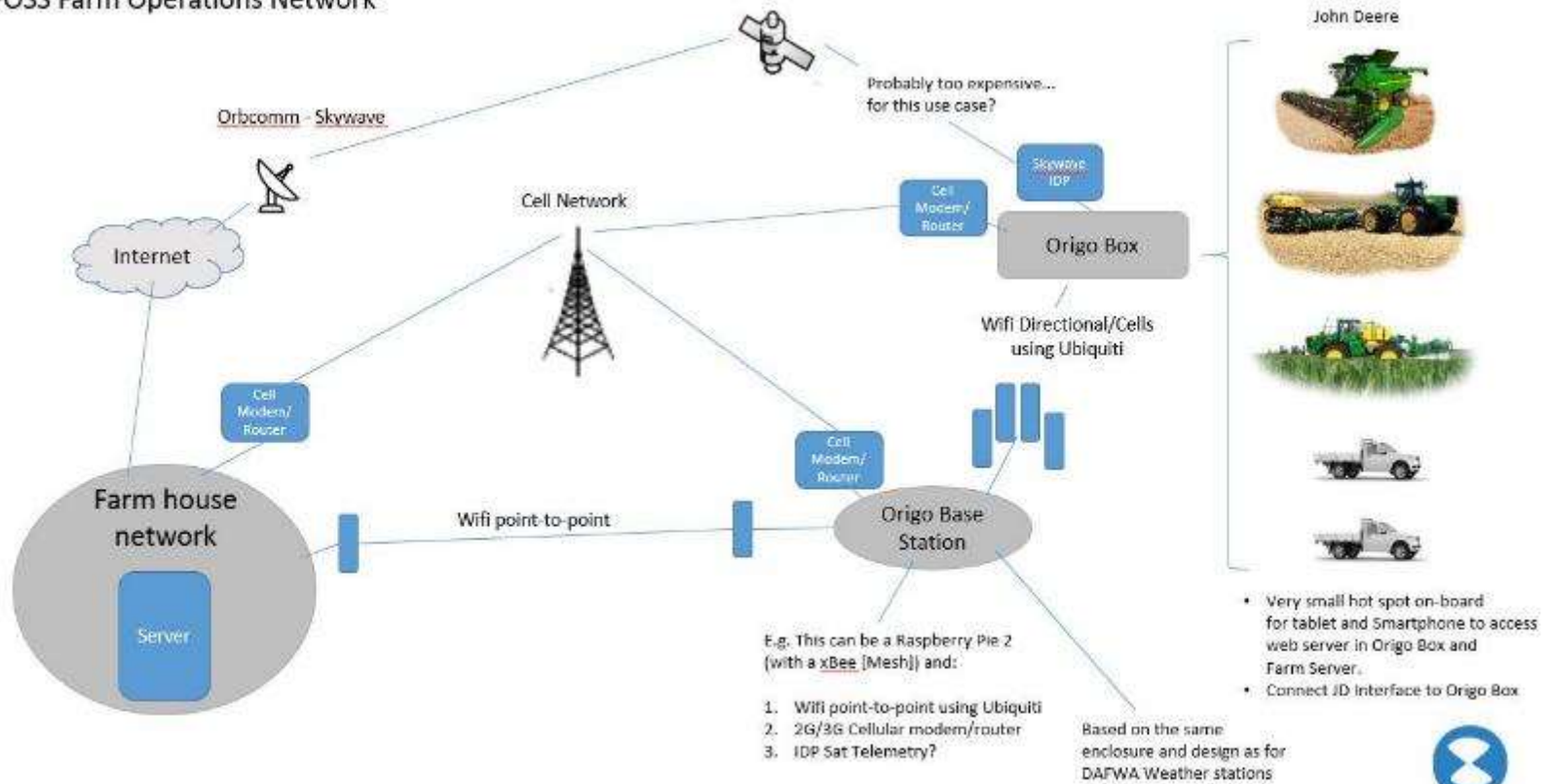
Wireless machine control



AFOSS Sensor and Control Network



AFOSS Farm Operations Network



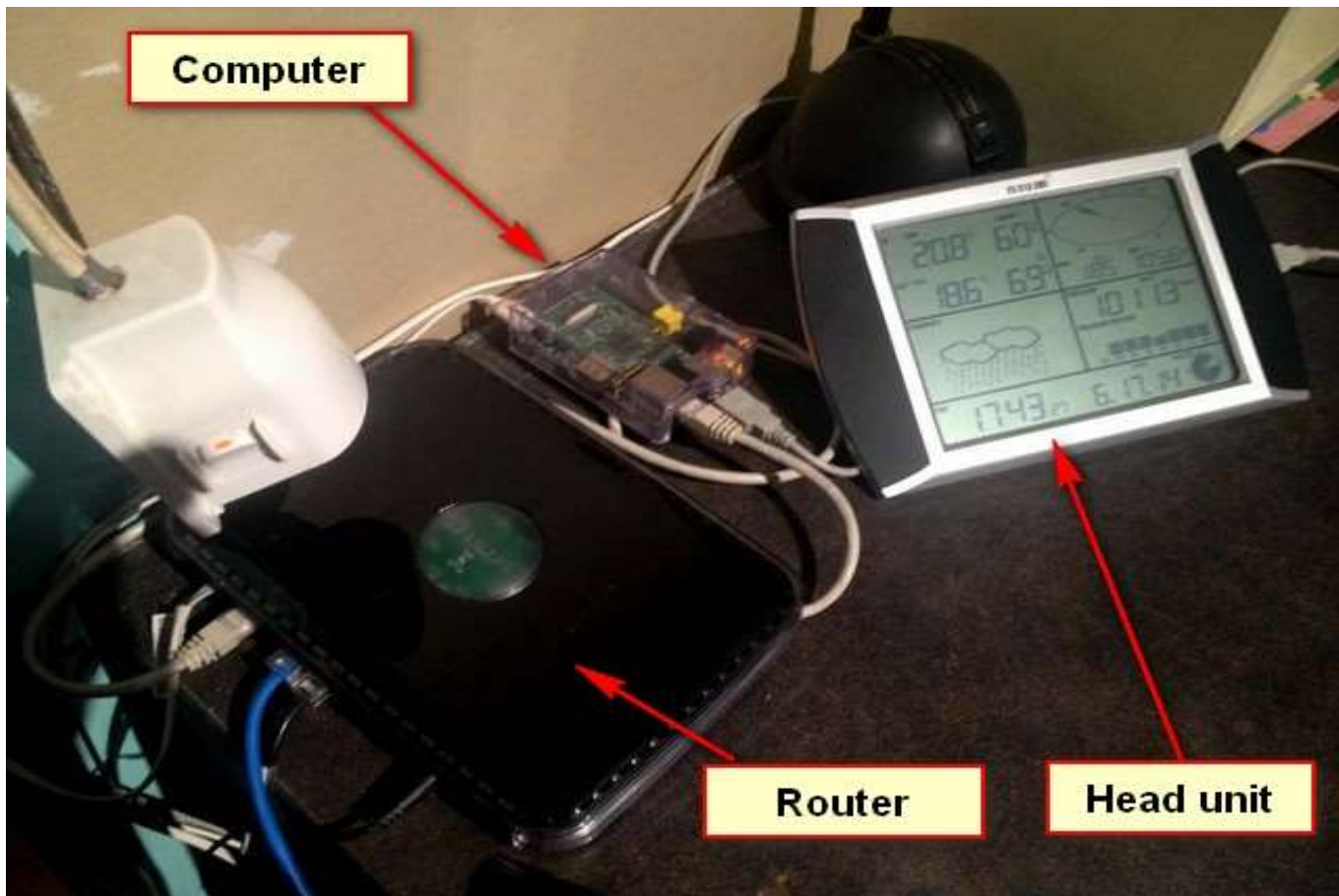
Always-on connectivity



On-board server prototype



Internet-connected Wireless Weather Station



MWDC: what we're doing now

- Mid West Digital and Communications Strategy
 - Working Group, Advisory Group
 - Digital Initiatives Catalogue
- Mobile Black Spots Round2
- Fixed Wireless Pilots
- Yuna
- DFES



What's coming

- Digital Flying squads/Digital Enterprise
- More smart farming initiatives
- “Data to Knowledge” – Pawsley Center
- Community WiFi – MidWest network
- Telehealth Network
- Inland Fibre
- More Fixed Wireless
- Tourism



Role of Government

- Assist in instances of “market failure”
- Bring the right parties together to collaborate
- Assist in securing start-up funds
- Fund only sustainable projects
- Must be for the common good



SUMMARY

- Seek out projects with transformational potential for the MW region
- Connect the players
- Strategy, Business Cases, talent and funding sources
- Cost-effective infrastructure delivery
- Equitable distribution of funding
- Educate and enable the regions



THANK YOU!

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