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GROWING THE DRONE INDUSTRY

Regulator and Industry TOGETHER

KEN VENN – FOUNDER & DIRECTOR UAVI

YOU TUBE VIDEO HERE

https://youtu.be/TS1D57qPXu0

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- SOUTH AFRICA PROCESS (2014-2017)
- DRONE INDUSTRY FACTS
- CHALLENGES

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SOUTH AFRICA RPAS PROCESS

- Industry and Regulator working together
- ICAO guidelines
- Consultative process
- Powerful regulations
  - VLOS
  - BVLOS
  - PILOT LICENSES
- Exemption process

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SOUTH AFRICA RPAS PROCESS

- 2014 - Industry engagement to develop RPAS laws
  - RPAS commercial flying BANNED Dec 2014-June 2015
- 2015 – RPAS laws published
  - 4 ATO's authorised
  - 4 ROC's authorised
- 2016 – 7 ROC's
  - UAVI 18 month process for ROC
  - 150+ ROC applications
  - ±320 Pilots trained
- 2017 – 13 ROC's
  - 200 awaiting > 18 months
  - RPL's > 500 and growing

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SOUTH AFRICA RPAS PROCESS

- HIGH INDUSTRY DEMAND FOR RPAS!!!!
- Target for Regulator
- SIMPLIFY REGULATIONS APPROPRIATE TO RISK
- UTILISE OPERATORS FOR STRENGTHS
  - ALREADY HIGHLY REGULATED
  - ALLOW SELF REGULATION WHERE APPROPRIATE
- BVLOS training syllabus
- STREAMLINE PROCESS
- "SPEED TO MARKET" CRITICAL

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RPAS INDUSTRY FACTS

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EXPONENTIAL INDUSTRY

- High Growth rate

"The rate of acceleration is accelerating"
Tom Sheba

- What are the sign posts that let you know?

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Exponential Industry

RPAS Industry is at the convergence of

3 Exponential Industries

- Internet of Things
- Advanced Battery Technology
- Automation software and Artificial Intelligence

The rate of growth will not slow down

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Exponential Industry

- Moore's Law - 2x 18 month - 41% CAGR
- Hendry's Law - 2x 18 month - 59% CAGR
- iPhone - since 2007 - 91% CAGR

- **DJI - since 2009 - ±90% CAGR**

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Disruptive Industry

- "Launch"
- "Major Brand"
- "Casualty"

Film v Cellphone camera

Fixed Line v Mobile

Railroad v Airline

Petrol Car vs EV

Manned v Unmanned aviation

No death of the original industry – Just a peak

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What are the drivers?

- How big is the Improvement?

- X10

- Is there a channel to market?

- Smartphone

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THE NEXT WAVES

- Drones are increasingly based on cutting-edge smartphone technology (Qualcomm Snapdragon platform).
- Drones surpass satellites in amount of data gathered and used.
- Computer vision, sense-and-avoid and optical tracking become standard in consumer drones.
- Major software companies integrate drone data into core offerings, taking "reality capture" mainstream.
- Drones become like Wi-Fi

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CHALLENGES

- Regulation vs. Operations
  - Industry demand is outstripping Regulator processes
  - Clear differentiation to assist speed to market
  - Technology advancement is ahead of regulator education process
  - Licensed industry freed to self regulate where feasible
    - Similar craft
    - Operations growth not restricted
  - Regulator vs Operator clearly defined

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CHALLENGES

- High level of Aviation knowledge
  - RPAS will operate in manned airspaces during our lifetimes
  - Current technology accelerates operating but not training
  - BVLOS training via ATO's (URGENT)
  - Cannot allow non trained Pilots in airspace.
- Personal professional standards
  - Industry personal standards for business
    - Legal, Licensed, Insured

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CHALLENGES

- Monitisation model for Regulator
  - Align Regulator revenue model with Industry growth
  - $/Regulator Action vs. $ /Operation
  - Leverage other industry associates:
    - Air traffic control – flight plans, Airspace management
    - Trade and Industry – Development funding for people growth
    - Industry body – Commercial UAV Association
    - ROC – Self Regulation

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THANK YOU

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