Agenda

➢ Introduction
➢ Unmaned Aircraft Systems (drones)
➢ Dutch Drone Company
➢ Services & Examples
➢ Technique & data
What are drones

Military:

Most known from the deployment during US missions against terrorists
- Reconnaissance
- Air to ground attacks
What are drones

Types:
- Multi-rotor
- Fixed wings
- Single rotor

Types of control systems:
- VLOS (visual line of sight)
- BLOS (beyond line of sight)
What are drones

Consumer/ hobby:
With the latest technique and prices the drones have become accessible for everyone. Number one gift for Christmas last year

FPV racing:
Latest hype; Started “underground” but with the dronePrix in Dubai now also mainstream

Commercial:
The drones offer unique and economic services in a wide range of industries, including package deliveries.
Dutch Drone Company:

Who are we and what do we do
Dutch Drone Company

Service provider by using Unmanned Aerial Systems (drones)

Key values
• Fully certified
• Professional
• Quality
• Data delivery
• Reliable
• Innovative
• Aviation background
Locations: RDM Innovation quarter

- Headoffice: RDM Innovation Dock
  Rotterdam Droogdok Maatschappij

- Irisch Drone Company, Dublin
- UK Drone Company, London
Certifications in the Netherlands

1. BvI
   Bewijs van Inschrijving van het UAS
   (Proof of registration of the aircraft)

2. BvL
   Bewijs van Luchtwaardigheid van het UAS
   (Proof of airworthiness of the aircraft)

3. Verzekering
   Verzekering van het UAS
   (Insurance of the UAS)

4. BvB
   Bewijs van bevoegdheid van de piloot
   (Proof of competence of the pilot)

5. VMS
   Veiligheids Management Systeem
   (Safety management systems for organisation and owner of the aircraft)
Drones - What do you need

Unmanned aircraft system (drone):
Platform offers flexible and cost effective services that weren’t possible a few years ago. With new techniques more and safer solutions keep being developed.

Pay-load systems:
The drone is a tool that allows to capture information via specific pay-loads/ sensors. New and smaller systems allow the capturing of data and information offering a wide range of solutions.

Software and knowledge:
Flying and collecting data is just the starting point, the software and people analyzing the data is what enables a good end product.
Our Services

Industrial services
• Inspections
  • Onshore
  • Offshore
• Mapping
  • Elevation models
  • Volume measurements
  • Orthophoto’s
• 3d Models
• Agriculture services
• Sniffer technology
• Live two-way communication video portal
• Search & Rescue/ security

Media & Entertainment
• Film & video
• Promotional
Inspections:
Mapping

Mapping:

- The UAV allows accurate mapping of landscapes or structures. Photos are taken while flying in a defined pattern. All the images can be “stitched” together to have a complete overview. Based on the position including the heights accurate models can be build using modern software.

Used for

- Landscaping
- Volume measurements
- Risk analyses
- Etc.
Photogrammetry/ 3d modeling

Mapping:

- 3d models allow us to bring an area or object into a 3d computer model. With the right tool and knowledge its possible to deliver results on 1-2mm level. Allowing volume calculations, measurements on damages, settlements of roads etc.
Photogrammetry/ 3d modeling

Used for

Example of volume measurement; first exact coordinates are being set by surveyor. All photos taken have exact coordinates and can be related to the points on the ground.
3d modeling & virtual reality

Example

Example of 3d model of a building to integrate in visual systems and run calculations on the site
Live 2-way streaming

With a 2-way video and sound portal it is possible to show the video during an inspection. Whilst the specialist can stay in their office and login to the secured portal they see everything they need during this inspection. This saves time and money and ensures they see what is relevant to them.
(live) film, photo & promo

- Commercials, tv, social media, (action) sports etc.
- Live broadcasting
- Promotional & events
Drones are the future of IoT because they:

- are not static
- are deployable
- can carry flexible payloads
- can be re-programmable in mission
- can measure just about anything, anywhere
Development

- Systems are getting smarter and smaller
- Autonomously / intelligent systems
- Evolution comparable with mobile smartphone
Questions ?
&
Anwsers ?
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