



MDA

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Company Presentation - Overview

- MacDonald, Dettwiler & Associates Ltd. (“MDA”) was founded in 1969 in Vancouver, B.C.
- Multiple recent business acquisitions /merge (SSL:2012, DigitalGlobe & Radiant Solutions: Oct.2017); parent company rebranded as MAXAR Technologies with four independent entities

MAXAR TECHNOLOGIES

Maxar Technologies is a leading global provider of advanced technology solutions for commercial and government markets

MDA

Internationally recognized leader in space robotics, satellite systems, surveillance and intelligence systems, defence and maritime systems and geospatial radar imagery

SSL

Leading commercial provider of communications and Earth observation satellites and scientific mission spacecraft for commercial and government markets

DigitalGlobe

Global leader in high resolution optical satellite imagery and information about our changing planet

radiant SOLUTIONS

Highly specialized provider of geospatial data, analytics, software and services to facilitate insights and intelligence where and when it matters most

What discriminates us is the combination of:

- Unmatched end-to-end expertise
- Adaptive and agile organization
- Purposefully innovative
- Committed to work hand-in hand with customers

~6,500 Employees ♦ \$1.6B USD revenues ♦ International Customer Base

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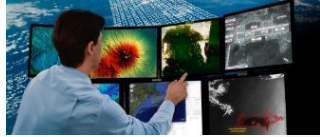
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MDA – Canada's High Tech Gateway to the World



Space Radar and Imagery

- Space-based radar missions and systems
- Radar analytics, services, and imagery
- Mission and infrastructure operations



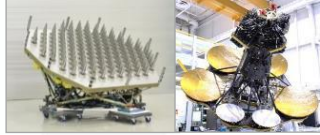
Ground Systems

- Multi-mission Earth observation ground systems
- Mission planning through reception, processing and analytics
- Enterprise geospatial systems



Robotics, Sensors and Automation

- Robotic manipulators, rovers, and sensors systems
- Space exploration (prime), satellite servicing
- Medical, nuclear and industrial automation



Satellite Systems

- Engineering, production and testing of antennas, electronics and payloads
- Space-based communications, radar, exploration and science
- High-volume production for large satellite constellations



Defence Systems

- System integration and complex system delivery and operations
- ISR: EW products, C2 and naval trainers , UAV mgt, airborne radar
- Engineering, production, in-service support partner

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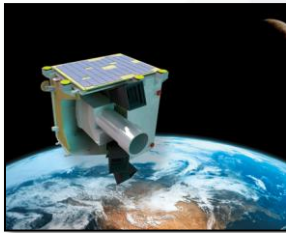
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MDA Capabilities of Interests for Today

Space Situational Awareness

- MDA primed the Sapphire satellite mission, which monitors thousands of objects in orbit.
- As well, MDA is active in the LEO “megaconstellation” market, and recognizes the necessity to properly manage the lifecycle of satellites (potential collisions, end of life, etc.)



Some generic industry trends:

- New sensor development (space, ground)
- Novel space constellation infrastructure
- Data fusion/integration
- Automated data analysis/exploitation to provide added value to operational decision-making

Robotics network/swarms

MDA has strong heritage and capabilities in:

- Enhanced autonomy of Unmanned Ground Vehicles (UGV)
 - Sensor Integration and Guidance Navigation & Control Algorithm Development
 - Obstacle Detection, Stair Climbing, Self-Navigation
 - Robot localization in GPS-denied environments
- Operator Workstations with Enhanced Situational Awareness
- Collaborative Manipulator Robotics (Robot/Human interaction)



Some generic industry trends:

- Vehicle autonomy improvements / artificial intelligence
- SWARM control (airborne, ground, naval)

Detection and Classification

- MDA designs and builds space-based and airborne radars
- MDA manages fleets of military UAVs
- MDA is a leader in EO ground stations and geospatial imagery, operates the RADARSAT-2 satellite and thus has access to current and archived image data
- MDA has EW ELINT antenna products in-service



Some generic industry trends:

- Improved sensors. For example:
 - new SAR/AESA radars
 - Improved electronic warfare signal intelligence
 - Increased presence/performance on UAV, UGV, UUV
- Improved imagery automated analytics and decision-making, especially for maritime surveillance, change detection and patterns of activities

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