

GLOBAL  
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Global Marketing Insights, Inc.



***BUSINESS MODELS DISRUPTING EO  
INDUSTRY”***

***APRIL 3, 2019 2:00PM - 3:30PM***

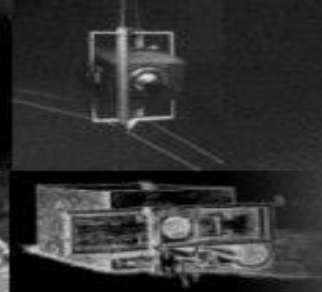
***GEOSPATIAL WORLD FORUM***

***#GWF2019 @GEOBUSINT***

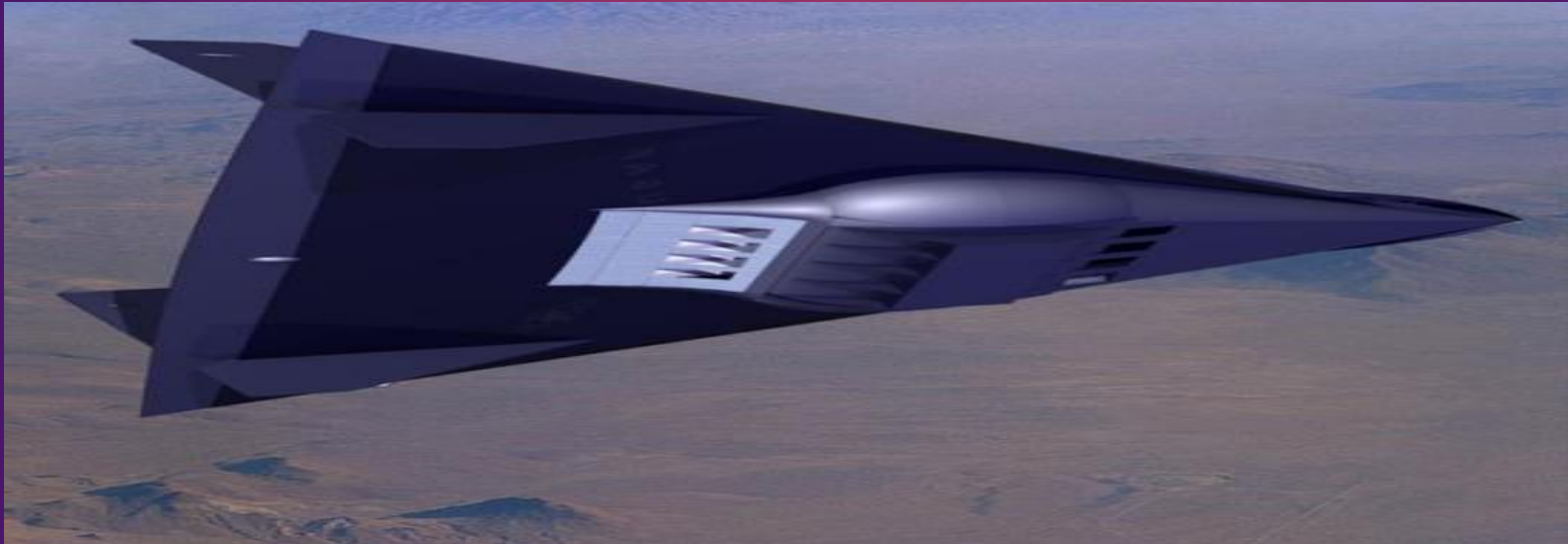
**Geospatial Business Intelligence Experts™**

**[www.globalinsights.com](http://www.globalinsights.com)**

# -From Hot Air Balloons, Kites, & Birds



# To Hypersonic Sensors



**A rendition of the SR-72 (Aurora)  
hypersonic ramjet capable of 6,000 mph**

# To Unmanned Systems



# To SMALLSATS



# T0 HUMAN SENSORS

- ***CELL PHONE Imaging***
- ***CELL PHONE GPS Coordinates  
-LOCATION Based Intelligence***
- ***ACTIVITY Based Intelligence***
- ***SINGLE Largest Sensor Collection  
Device The “Human Sensor”***



# DISRUPTIVE FORCES

**First the  
Disruption then the  
Business Model!**

# \$\$\$\$- SPACE THE NEW FRONTIER

## Global Space Value:

- 2019 - \$400B
  - 2040- \$3-4 Trillion
  - 2001-2019 - \$18B in Space
- 

## Start-Ups



# \$\$\$\$- SPACE THE NEW FRONTIER

## WHO:

- Governments
- VC's
- Banks
- Private/Industry Wealth

# \$\$\$\$- SPACE THE NEW FRONTIER

## WHY:

- National Security
- Maritime
- Environment – Food Energy – SUPPLY  
CHAIN ADVANTAGE
- \$\$\$\$ and Exit Strategies

# Global Disruptive Forces to EO

5 “global disruptive forces” altering the world landscape and impacting the Global Commercial Geospatial Industry and include:

- (1) Global Aging Workforce
- (2) Focus
- (3) Pace
- (4) Flow
- (5) Business Behaviors – Exit is the Goal not Growth



# Global Disruptive Forces To EO

4 innovation phases impacting the Global Commercial Geospatial Industry and include:

- (1) Irruption
- (2) Frenzy
- (3) Synergy
- (4) Maturity (hopefully)

# Global Disruptive Forces Creates Entrepreneurship

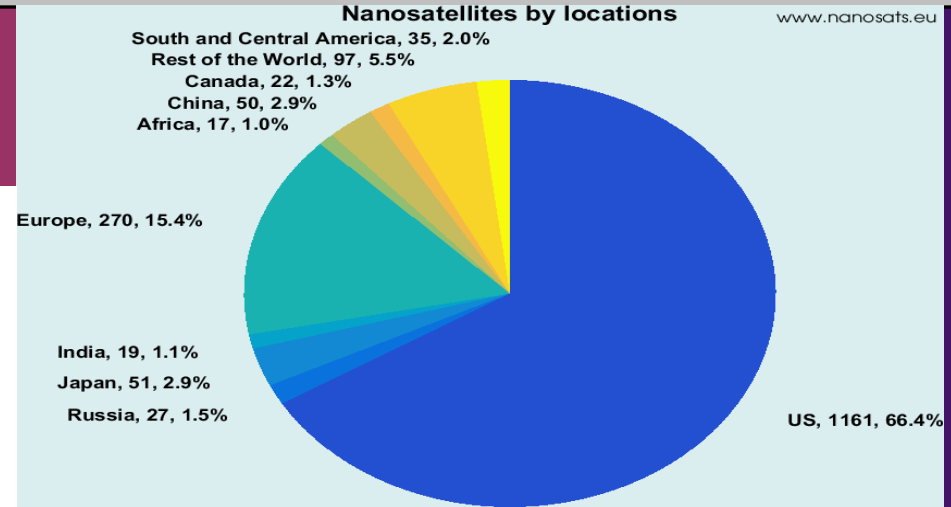
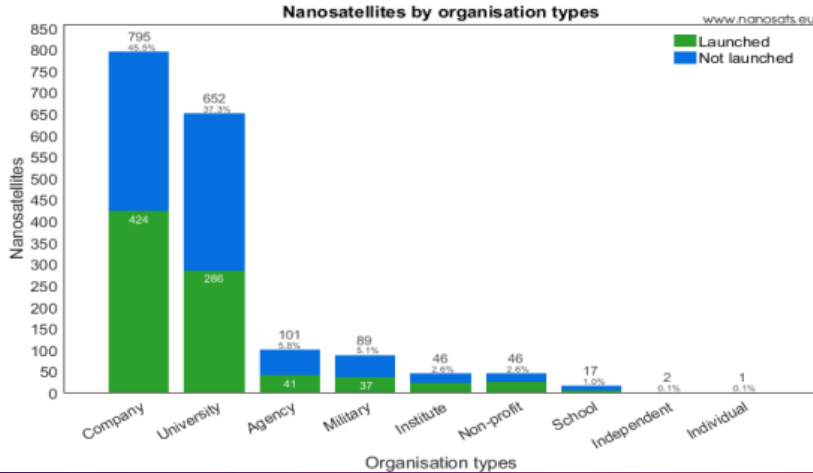
## EO RESPONSE:

1. Space Hardware and Associated Hardware (Lauch/Ground,Com)
2. AI / ML / DL
3. Advanced Analytics

# Democratization and Commoditization In Low Earth Orbit

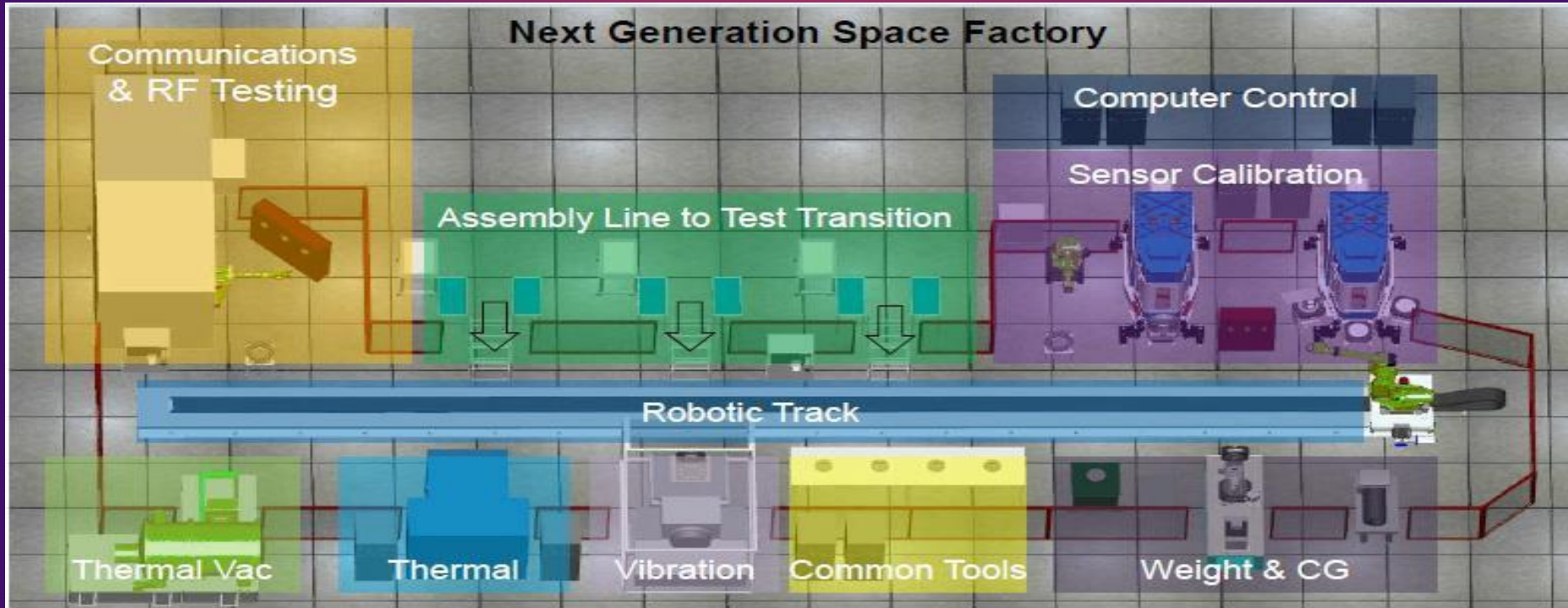
## Commercial Investment Growth

- 2016 - \$990 million  
to



**Outstripped the government's ability to lead this industry, the commercial world pushes the space proposition to commercial markets such as agriculture, finance and energy**

# Entrepreneurship Enables: *Advanced Robotics*

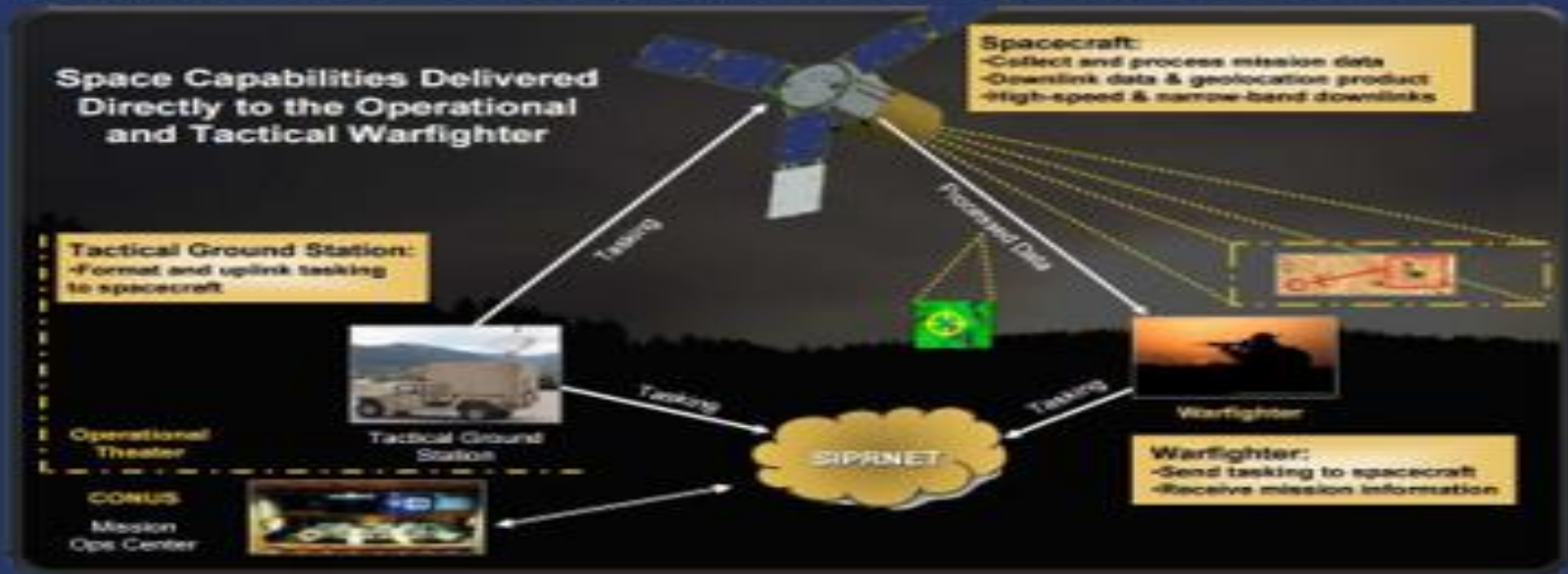


# Entrepreneurship Enables: *Operationally Responsive Space*

## Enabling Operationally Responsive Space



Breaking Old Paradigms and Giving JFCCs the First Realistic Opportunity for Responsive, Dedicated Space Capabilities at the Operational and Tactical Level



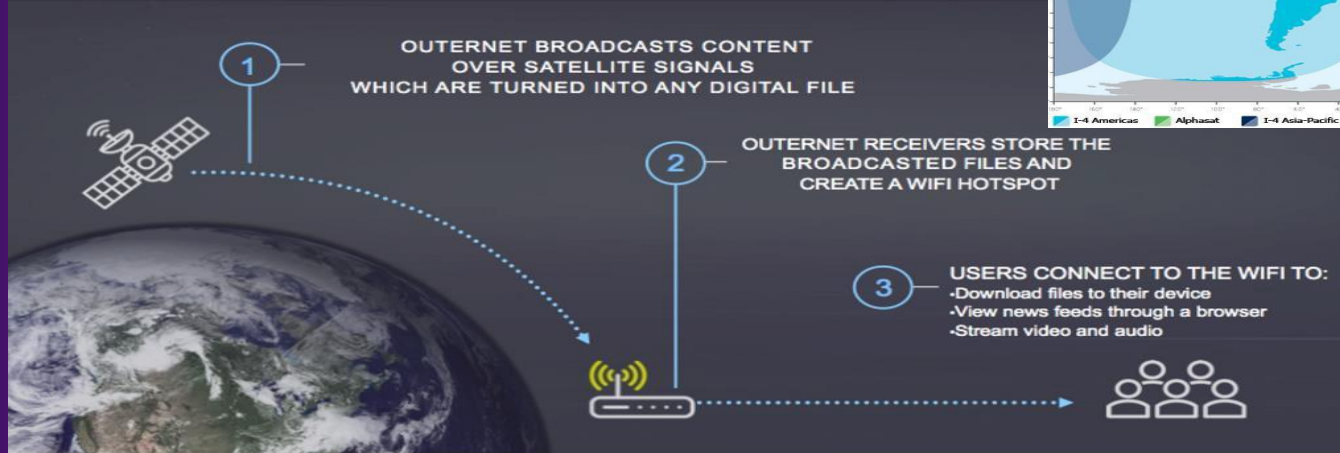
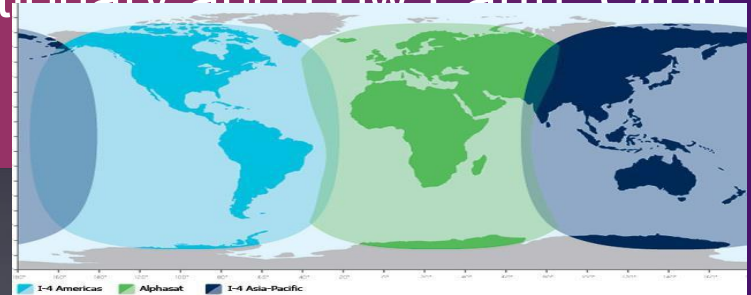


# Entrepreneurship Enables:

## Global Internet



Outernet's goal is to provide global free access to the internet through geostationary and Low Earth Orbit satellites



# Business Model Disruption

## Past



*Main Frame Computer*

## Present



*Cloud Computing*



*Mobile Devices*



*High Performance Computing*

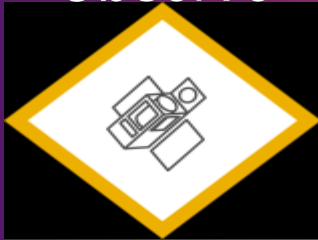


# Entrepreneurship Enables:

## *Business Model Disruption*

### Example: Black Sky

*Observe*



*Analyze*



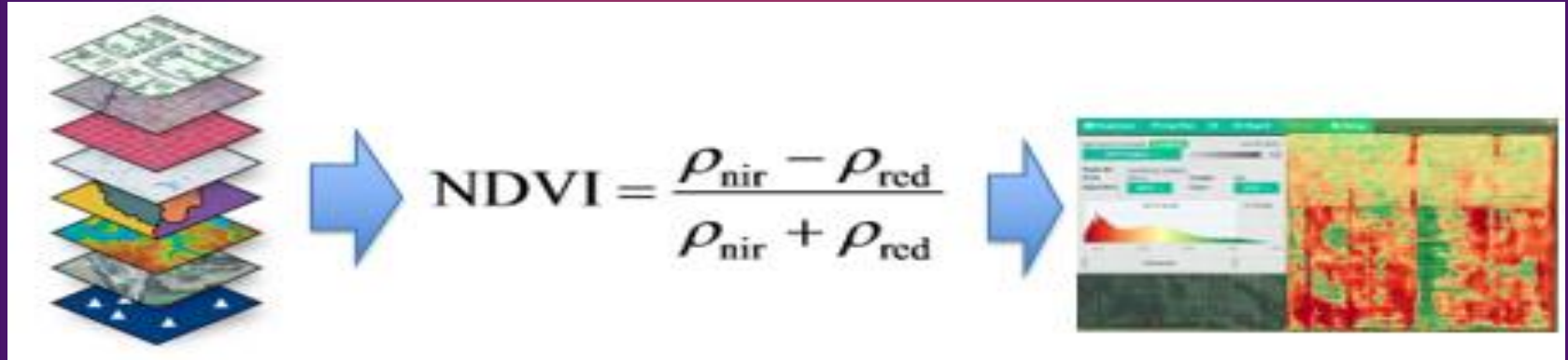
*Act*



- Transitioning from an ***imagery sales*** business model to an ***information-as-a-service*** business model
- They deliver timely, relevant, and actionable information so you can make swift and informed decisions.

# Democratization and Commoditization of Data with

*Big Data Analytics for Multi-Source, Persistent Observations*



Imagery &  
Data

Model or  
Algorithm

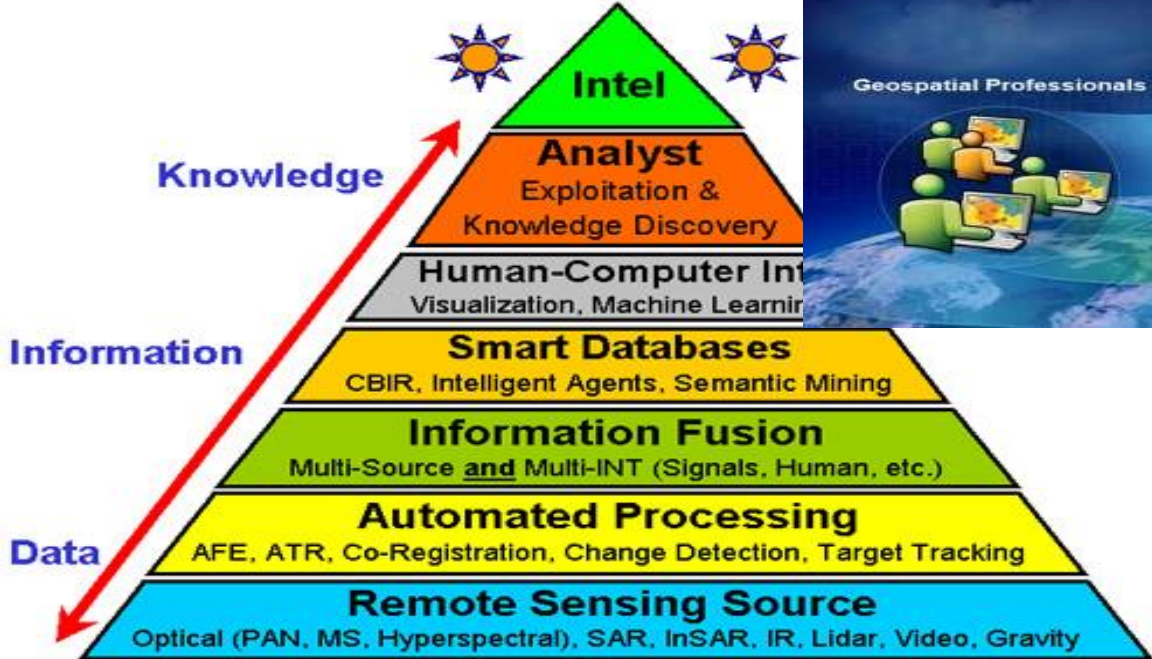
Geospatial  
Visualization

*Streaming Data from Space – Persistent Coverage – Big Data Analytics – Analysis-  
as-a-Service – Knowledge and Answers!*

**Where do these  
Disruptions leave  
the Market/User?**

# Markets/User Wants :

*Detections NOT Pixels*





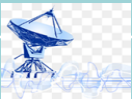


# What's NEXT?

## Holography/Virtual Reality:

- **Virtual Reality 3-D(4-D)Screens For Home Interface**
- **Walls Disappear Replaced by Pleasant Surrounding Images (Holodeck)**
- **Geospatial Interfaces Will be as Easy to Use and As Simple Touch Screens**



# Range of Bus. Models *New EO Space*

Key Segment	Relative Strength in Industry	Range of Business Models
<b>Imagery Builders/Producers</b> 	<b>-1000's</b> of Global Players from Labs, Universities, Entrepreneurs, Gov't, Space Agencies	<ul style="list-style-type: none"> <li>-Transactional</li> <li>-Subscription</li> <li>-Basemap Services</li> <li>-Analytics as a Service</li> <li>-Volume Discounts</li> <li>-Monitoring</li> </ul>
<b>Launch Capabilities</b> 	<b>-100's</b> New entrants globally -Few Strong players changing their models -Space Agencies developing and reclassing current vehicles	<ul style="list-style-type: none"> <li>-Firm Fixed Price with Disaster Clauses</li> <li>-Payable over time</li> </ul>
<b>Ground Stations</b> 	<b>-DOZENS+ <u>Strong Global Players</u></b> -Localized, Portable and Internet based Providers entering space	<ul style="list-style-type: none"> <li>-Yearly Downlink Fees negotiated with Distribution Rights based on Station Location</li> <li>-Time based and Band-Width based Fees</li> <li>-Support tools in terms of black box and downlinks and uplinks</li> </ul>
<b>Value Added Distributors/ Providers</b> 	<b>-50,000 +</b> Fragmentation increasing globally with a Few Strong Players typically supported by Government Funding -Agriculture, Water, Energy and Map Based Apps	<ul style="list-style-type: none"> <li>-Firm Fixed Price with Commission Rates for Distribution</li> <li>-Firm Fixed Price for Analysis plus Cost of Imagery</li> <li>-App Monthly Fee</li> <li>-AaaS</li> </ul>
<b>Geospatial Technology Creators/ Producers</b> 	<b>-1000's</b> global players with Players with the Geo ML/AI analytics capability and Remote Sensing Science understanding	<ul style="list-style-type: none"> <li>-Project Fee Based</li> <li>-Subscription Based</li> <li>-Monitoring Report Based</li> <li>-AaaS based on consumption, time, AOI</li> </ul>





**Thank You!**

***Geospatial Business Intelligence Experts™***

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