

# Business Model Canvas: satellite operators and satellite providers

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## Abstract

Business Model Canvas (BMC) is a graphical tool developed by Alexander Osterwalder in 2004. Since then, this business model is one of the most useful tools used all over the world. The main idea is to visualize the business model in a simple way in order to detect weakness and check whether it works or not. It is split in different building blocks. Each of them shows the main keys for starting a business, including customers, route to market, value proposition and finance. The analysis of two different BMC is presented: one relates to Satellites Operators and the other relates to satellite provider companies. The process to developed both models is also explained. This study is part of the DISCOVERER H2020 European Project: ID 737183. **Keywords:** *Business, Model, Canvas, BMC, operator, satellite, provider, strategy, stakeholder, value*

## 1. Satellite Operators BMC

The BMC related to a typical satellite operator company is shown. As can be seen, incomes are generated just selling 1% of the total imagery per year. Therefore, the main challenge is to get customers. An exhaustive market study is required in order to evaluate the feasibility of this business.

KEY PARTNERS	KEY ACTIVITIES	VALUE PROPOSITION	CUSTOMER RELATIONSHIPS	CUSTOMER SEGMENTS
<ul style="list-style-type: none"><li>• Polar ground station service</li><li>• Antenna manufacturer</li><li>• Ground segment manufacturer</li><li>• Ground segment software</li><li>• Satellite seller</li><li>• Antenna assembly and radio network certification</li><li>• Ground segment building</li><li>• Control center</li><li>• Security and multiservice network</li></ul>	<ul style="list-style-type: none"><li>• Contacting EO satellite companies</li><li>• Purchasing one low resolution EO satellite active</li><li>• Contacting ground segment companies</li><li>• Purchasing or building a ground segment to download satellite data</li><li>• Data management</li><li>• Data storage</li><li>• Data processing</li><li>• Data catalogue</li><li>• Marketing</li><li>• Images sales</li></ul>	Market launching of high resolution satellite imagery with flexibility to plan data acquisition. Low cost and exclusive final product	<ul style="list-style-type: none"><li>• Full service</li><li>• Personalized contact with the client</li><li>• Personalized and telephone attention.</li></ul>	<ul style="list-style-type: none"><li>• No profit organizations (universities and research centers)</li><li>• Post-processing imagery companies (hydrographical confederation) which offer a high added value services</li><li>• Customers imagery companies</li></ul>
	<b>KEY RESOURCES</b>		<b>CHANNELS</b>	
	<ul style="list-style-type: none"><li>• Software engineering</li><li>• Ground segment operators</li><li>• Management, maintenance, marketing staff and data processing staff</li><li>• Online catalogues (database)</li><li>• Brokers</li><li>• Computers</li><li>• Software y licenses</li><li>• Servers</li><li>• Web page</li><li>• Trademark</li></ul>		<ul style="list-style-type: none"><li>• Specialized conferences</li><li>• Networking</li><li>• Webpage</li><li>• e-mail</li><li>• International chamber of commerce or national government</li><li>• Social media</li></ul>	
COST STRUCTURE			REVENUE STREAMS	
<b>Fixed Costs:</b> salaries, satellite, computers, software y licenses, serves, web page, building y ground segment rent, marketing and sales			Selling satellite imagery (raw-data, processed y post-processed)	
<b>Variable Costs:</b> maintenance expenses and supplies, internet, database				

## 2. Satellite providers BMC

Next BMC relates to satellite provider companies evaluating the market of manufacturing and selling satellites. In this model the cost structure is higher than the previous study because it is necessary to acquire all the different parts of the satellite and assembly them. This increases the cost significantly. Regarding the revenues, retail price is higher than total cost. Therefore, there is always a profit to be made. As in the previous case, an exhaustive market study is required in order to evaluate the feasibility of business.

KEY PARTNERS		KEY ACTIVITIES	VALUE PROPOSITION	CUSTOMER RELATIONSHIPS	CUSTOMER SEGMENTS
<ul style="list-style-type: none"><li>• Flight segment</li><li>• Ground segment software</li><li>• Antenna manufacturer</li><li>• Launch segment</li><li>• Environmental test facilities</li><li>• Radiation test facilities</li><li>• Security and multiservice network</li><li>• Government: funding through Miner funds</li><li>• Control center</li><li>• Cleaning room</li></ul>	<ul style="list-style-type: none"><li>• Satellite system design</li><li>• Manufacturing or purchasing of: flight segment, ground segment, launch segment and user segment</li><li>• Components validation</li><li>• Components integration</li><li>• Insurance recruitment</li><li>• Satellite launch</li><li>• Satellite commissioning</li><li>• Set-up of the system</li><li>• System validation</li><li>• Purchasing or renting of offices</li><li>• Satellite register</li></ul>	Selling of complete satellite system	<ul style="list-style-type: none"><li>• Full service</li><li>• Personalized contact with the client</li><li>• Personalized and telephone attention</li></ul>	<ul style="list-style-type: none"><li>• Governments</li><li>• Spatial agencies: ESA, NASA</li><li>• Satellite operators companies: Hispasat, Urthecast, Itevelesa, Hisdesat, Intelsat</li></ul>	
	<p>KEY RESOURCES</p> <ul style="list-style-type: none"><li>• Engineering, PM, integration staff, test staff, management staff, director, executive secretary, receptionist, purchasing staff, security staff</li><li>• Cleaning room for test and equipment</li><li>• Offices and equipment</li><li>• Internet</li><li>• Software and licenses</li></ul>		<p>CHANELS</p> <ul style="list-style-type: none"><li>• Specialized conferences</li><li>• Networking</li><li>• Webpage</li><li>• e-mail</li><li>• International chamber of commerce, or national government</li></ul>		
COST STRUCTURE			REVENUE STREAMS		
<p><b>Fixed Costs:</b> Salaries, renting or building facilities, renting or building the Ground Segment, maintenance, security, computer area, renting or building the cleaning room and equipment</p> <p><b>Variables Costs:</b> flight segment, launch segment, launch insurance, maintenance expenses and supplies, cleaning room equipment</p>			Selling of complete satellite system every 3 years		

## 3. Conclusions

Two different business model were analyzed, one relates to manufacturing and selling satellites, and the other to selling satellite imagery. The main conclusion is that both business could be profitable, nevertheless it would be necessary to perform an exhaustive market study in order to evaluate the feasibility of covering a broad customer market.

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