

The Form of the Case XCor (revised version)

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2. The Scenario	
<p>In the year 2012 during the International Symposium for Personal and Commercial Spaceflight in New Mexico a company called XCor presented a prototype of an aeroplane - Lynx. Lynx flies at a speed of over 4,000 kmph. The first idea of its inventors was using Lynx for space tourist flights. Lynx was ferrying a pilot and passenger to space for a few minutes of microgravity and the ultimate view of the Earth. The tickets were sold for \$95,000 per person. At the beginning the commenters were very pessimistic about the success of the company, but as the time has shown, they were wrong. Although the price of the tickets was high, the interest was big enough to provide the capital needed for further development of XCor. Soon after these planes were used as incredibly fast space taxi, allowing to get from New York to Tokyo only within 90 minutes. Introduction of Lynx to commercial production has revolutionized travel industry. First the space taxis were used only to travel between continents. However, as the number of trained pilots increased, the space taxis started to be used to travel between the biggest metropolises around the globe.</p> <p>XCor story started with four private founders, who dreamt of spaceflight and realized that the only way for them to get to space, was to make it affordable for private citizens. XCor was founded in the year 1999. At the beginning they worked at their chief engineer's tiny hangar. XCor's area of operations has covered research, development, project management, production of safe, reliable, reusable launch vehicles, rocket engines and rocket propulsion systems. In the year 2012 the company employed over 20 highly-skilled, experienced and talented employees, who worked in 10,375 square foot hangar at the Mojave Air & Space Port in Mojave, California. The funding for research and development has come from commercial development programs, government research contracts and business angels.</p> <p>The company became better known to the public after a Lynx trip was offered as a prize for one of the fans of the CBS sitcom The Big Bang Theory during the San Diego Comic-Con. This incredible trip was first offered on stage by former NASA astronaut Richard Searfoss to Big Bang co-star Simon Helberg, whose character traveled to space as a NASA astronaut. Surprisingly, he refused. After the success of Lynx the company became a leader in the commercial space transportation industry. Simon Helberg had to pay the full price for the trip four years after the famous offer was made and nowadays he owns the latest Lynx version.</p> <p>Presently many of the biggest cities in the world have infrastructure allowing to take off and land with Lynx, while more and more private customers wish to be an owner of such a spacecraft. Two years ago XCor's patent for its invention lapsed, and the technology was released to the public. As a result some new competitors have entered the market. XCor still has some technological advantage over its rivals and</p>	

recognized expertise.

Within the XCor game up to 5 virtual companies are set up competing in the aerospace market. Your main task is to set up a company whose products will meet consumer groups' expectations and to do business so as to gain a competitive advantage on the aerospace market. Virtual companies operate in 5 localizations: New York (headquarters), Lima, Paris, Hong Kong and Sydney and their key goal is to meet expectations of 3 consumer groups in 5 different locations.

3. The Company

Your newly set up company will compete in the aerospace market. Within the aerospace industry other companies will enter the market at the same time as your company. All competitors will start with the same resources and knowledge of the market. All companies will produce and then sell aeroplanes through company-owned sales offices in 5 metropolitan localizations around the world.

The following broad decisions have to be made by every virtual company during the game:

1. Setting up of a company – designation of the company's name, its mission, vision and business strategy.
2. Organization of the team – indicating cooperation rules and division of tasks between team members.
3. Evaluation of market opportunities and setting up operations (creation and development of production lines, creation of a product, production limits, choice of suppliers, transfer of production between warehouses).
4. Employment of sales and manufacturing staff, indicating their salaries and trainings.
5. Elaboration of pricing strategy (prices for products for different markets and target groups) and marketing strategy (newspaper ads, TV commercials, net websites and street ads for different products – their quantity per round and frequency).
6. Evaluation of market performance and potential improvements.
7. Evaluation of the final market share and current balance.

The game is composed of 7 rounds. After every round the teams will know the results of the previous round (market share, current balance etc.). Thanks to the reports that are provided after every accomplished round, teams can improve their performance and better customize their products, change the target group, diminish/increase production and employment, set up new sales offices or production line or close existing ones, develop production lines or warehouses.

For technical reasons it is important to submit every decision made within the team by clicking on SUBMIT DECISION.

4. The Product

The original Lynx is an aeroplane that flies at the high of up to 100 km (330,000 feet) and at a speed of more than 4,000 kmph. It is a horizontal takeoff and horizontal landing vehicle, but instead of a jet or piston engine, it uses its own fully reusable rocket propulsion system to take off and land safely. In other words it takes off and lands like the Boeing 737. The aerospace needs a takeoff route of 2.4 km length.

The technology offered in Lynx is very sophisticated. The Lynx's main engines run with the help of flight weight rocket piston pump hardware and liquid oxygen. Its wing area is sized for landing at moderate touchdown speeds near 90 knots. The aerospace is about 9 meters (~30 feet) in length with a double-delta wing that

spans about 7.5 meters (24 feet). Its capabilities allow high tempo operations, up to several (depending on a version) flights per day, rapid call-up, fast turnaround between flights, low cost operations and maintenance (O&M), and a focus on safety and reliability. This allows to keep space plane's operating and maintenance costs at a relatively low level and minimize its negative impact on natural environment. Depending on a version Lynx can carry from 2 up to 6 people (altogether with a pilot). While designing an aerospace within the game it is of key importance to take into account 3 parameters (assessed on a 10 point scale):

1. Tech index – new technological solutions in the aerospace, reliability;
2. Eco index – ecologically friendly solutions for example in petrol consumption;
3. Quality index – comfort of travel, fancy look and design inside the aerospace that can impress the co-travelers.

The higher the indexes, the higher the price of an aerospace.

5. Customers						
Group name	Private elite					
Description	Private elite group consists of customers that pay a lot of attention to up to date innovations and gadgets. They are mainly celebrities and billionaires. They travel a lot on long distance routes and time is very precious for them. This is why this group has the longest traditions of Lynx use. These customers also value comfort of travel, fancy look and solutions that can impress their co-travelers. They have a lot of money and are willing to spend it on goods that will make a good impression and highlight their economic status. This is why they are often repeat customers and decided to buy the latest version of Lynx.					
Preferences		Very low	Low	Medium	High	Very high
	Eco				x	
	Tech					x
	Quality					x
	Price	x				
Group name	Business people					
Description	This group consists mainly of private businessmen that operate across continents. They believe time is money. They care about their image so they pay some attention to ecologically friendly solutions. They do not need to have the newest technology, but they want to get reliable, fast, relatively inexpensive aeroplane that can be used many times during one day.					
Preferences		Very low	Low	Medium	High	Very high
	Eco				x	
	Tech			x		
	Quality				x	
	Price		x			

Group name	Travel agents					
Description	Companies offering travels directly to customers. They usually have several Lynx taxis and offer travel services on various routes. Since private customers are price sensitive they are interested in low price vehicles that can be used on long and short routes and generate low maintenance and usage costs. They also want them to take as many people as possible and repeat travels many times a day.					
Preferences		Very low	Low	Medium	High	Very high
	Eco	x				
	Tech		x			
	Quality		x			
	Price					X
6. Market(s)						
Market name	Whole world					
Localization	Hong Kong					
Market shares	Group name		Market share (%)			
	Private Elite		35			
	Business People		45			
	Travel Agent		20			
Localization	Lima					
Market shares	Group name		Market share (%)			
	Private Elite		45			
	Business People		45			
	Travel Agent		10			
Localization	New York					
Market shares	Group name		Market share (%)			
	Private Elite		25			
	Business People		45			
	Travel Agent		30			
Localization	Sydney					
Market shares	Group name		Market share (%)			
	Private Elite		10			
	Business People		65			
	Travel Agent		25			
Localization	Paris					
Market shares	Group name		Market share (%)			

	Private Elite	25
	Business People	55
	Travel Agent	20
7. The Game		
Suggested duration (in round)	10, duration of one round is about 1 hour	
Suggested number of teams	5	
Suggested number of team members	5	