Institutionen för Data- och Systemvetenskap

Stockholms universitet

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IS1

Verksamhets- och affärssystem

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Students are allowed to bring lecture notes, exercise notes, exercise solutions, course literature and calculators to the exam.

The written exam measures goals 1, 2, 3, and 4 of the course.

In order to get grade A for the written exam, all goals must be fulfilled with grade A. The same rule applies to grades B, C, D, E, and Fx.

The exam contains a number of questions.

Question 1 (measures Goal 1)

For each of the following statements, determine whether it is true or false. Justify your answers carefully.

1. Some internal influencers can be strengths for achieving goals.
2. Some external influencers can be weaknesses for employing means.
3. Business models are primarily useful for representing and reasoning about procedural aspects of business communication, including document exchange.
4. An exchange process that includes use stockflows must also include take stockflows.
5. Only economic contracts can fulfil economic commitments.
6. An economic commitment is always related to at least two economic agents.
7. In an EPC diagram, an event can sometimes be immediately followed by another event.
8. "The revenue shall increase by more than 25% until the end of 2018" is a good formulation of an objective.
9. ERP systems are more useful for goods producing companies than for service producing companies in the public sector.
10. The following is an example of a directive speech act: "I will give you a teddy bear for Christmas".

Question 2 (measures Goal 2)

Read the following text from Wikipedia about Airbnb:

"Airbnb is a website for people to list, find, and rent lodging.[1] It has over 1,500,000 listings in 34,000 cities and 190 countries.[2][3][4] Founded in August 2008 and headquartered in San Francisco, California, the company is privately owned and operated by Airbnb, Inc.[5]

As of July 2011, the company had raised US$119.8 million in venture funding from Y Combinator, Greylock Partners,Sequoia Capital, Andreessen Horowitz, DST Global Solutions, General Catalyst Partners[6] and undisclosed amounts from Youniversity Ventures partners Jawed Karim, Keith Rabois and Kevin Hartz,[7] and from A Grade Investments partners Ashton Kutcher and Guy Oseary.

Business model[edit]

Airbnb runs on a marketplace platform model where it connects hosts and travelers and enables transactions without owning any rooms itself.[59] Such platforms disrupt traditional industries by creating new sources of supply and relying on curation for developing quality.[60] Unlike traditional hotels, Airbnb scales not by scaling inventory but by increasing the hosts and travelers and matching them with each other.[61]

Operations[edit]

Airbnb is an online marketplace for vacation rentals that connects users with property to rent with users looking to rent the space. Users are categorized as "Hosts" and "Guests," both of whom must register with Airbnb using a variety of means. A valid email address and valid telephone were initially the only requirements to build a unique user profile on the website, however as of April 2013, a scan of a government issued ID is now required.[62]

Profiles include details such as user reviews and shared social connections to build a reputation and trust among users of the marketplace.[63] Other elements of the Airbnb profile include user recommendations and a private messaging system.[64]

In addition to providing personal information, hosts display listing details including price, amenities, house rules, imagery, and detailed information about their neighborhood. Due to the nature of the business, a merit system is in place to allow guests and hosts to leave references and ratings which are displayed to the public in order to provide an evaluation method.[65]

Since 2008, the website has developed to include social connections pulling data from social networking services such as Facebook. As of May 2011, the site uncovered over 300 million connections between Airbnb and the Facebook user groups.[66]"

The following text is from the web site of Airbnb:

"Founded in August of 2008 and based in San Francisco, California, Airbnb is a trusted community marketplace for people to list, discover, and book unique accommodations around the world — online or from a mobile phone or tablet.

Whether an apartment for a night, a castle for a week, or a villa for a month, Airbnb connects people to unique travel experiences, at any price point, in more than 34,000 cities and 190 countries. And with world-class customer service and a growing community of users, Airbnb is the easiest way for people to monetize their extra space and showcase it to an audience of millions."

Construct a goal model for Airbnb. The model should include at least:

- 6 goals
- 6 means
- One means for every leaf goal
- One objective for every leaf goal
- 6 influencers
- One influencer that is both a strength and a weakness (mark this one clearly in your diagram)

- One influencer that is both a threat and an opportunity (mark this one clearly in your diagram)

Your goal model is to include the following items:
- Some hotels are planning to offer services similar to the one of Airbnb
- Travelling is increasing worldwide
- Many people think ordinary hotels are boring
- Some hosts at Airbnb have been unreliable
- Increased market share
- To be available in more than 50000 cities at the end of 2017
- To offer not only rooms but also food and drink
- Many people are very concerned about safety
- To expand rapidly worldwide
- Many people like to see how others live in their daily lives

For each item above you need to choose whether to represent it as a goal, an objective, a means, or an influencer. You need to reformulate the items above so that they clearly express goals, objectives, means, or influencers. For example, the bullet "High profit" should be formulated as a goal "The profit of the company shall be high".

You will need to make your own assumptions about Airbnb. State these explicitly.

Question 3 (measures Goal 3)

You have been hired to design a new business model for Airbnb, see question 2.

Construct a VDML model for the value network around Airbnb. Make sure to describe the value propositions clearly. (You may make your own assumptions for solving this.)

Question 4 (measures Goal 4)

There are two different ways in which a guest can rent a room at Airbnb:
1. The customer wants a room of a certain size in a certain city, but he or she does not care about exactly which room. For example, she says "I want a room for two persons in Amsterdam". A contract will then be established with Airbnb and later on Airbnb will provide a room fulfilling the requirements given by the guest.
2. The customer wants a specific room at a specific place. For example, she says "I want the room at the third floor of Hoijenstrasse 15 in Amsterdam". Airbnb will then provide her this room.

a) Construct an exchange diagram (including commitments and contracts) for case 1. above. Relate your diagram to REA using stereotypes.
b) Construct an exchange diagram (including commitments and contracts) for case 2. above. Relate your diagram to REA using stereotypes.

c) Identify a conversion process that can occur at Airbnb. Construct a diagram for this process. Relate your diagram to REA using stereotypes.

Airbnb uses the following process for accepting new hosts. First, a potential host sends in an application, which contains information about address, room size, bathroom availability, etc. The potential host also suggests a price. Airbnb checks that the information seems reasonable. Airbnb also checks that there are no criminal records. Furthermore, Airbnb checks the price. If it seems too low or high, Airbnb asks the potential host to adjust the price. And the potential host may or may not agree to the adjustment. Finally, Airbnb decides whether to accept the potential host or not.

d) Construct an EPC diagram for the process above. The text is incomplete, so you need to make your own assumptions.

Please hand in your course evaluation via Daisy!