First Name:	Last Name:	Student ID Number:

Exam Information Management

17.01.2019

You have 90 minutes to work on the exam. You can achieve a maximum number of 90 points. Use the points for each task as an indication how long you should work on it (i.e. each point equals one minute).

Please, do not use additional sheets of paper you brought along yourself. If you need more, official paper will be provided.

Put your name on the cover page and your student ID number also on each of the following pages.

Answer all of the exam's questions either in English or German and stick to the chosen language throughout the whole exam.

Indicate clearly, if you need to make assumptions.

Good luck!

task	1	2A	2B	3A	3B	4A	4B	4C	5	6	Σ	grade
maximum	16	6	6	8	10	4	4	12	8	16	90	
actually achieved												

1 IT Strategy (16 Points)

Uber is a peer-to-peer ridesharing, taxi cab, food delivery, bicycle-sharing, and transportation network company headquartered in San Francisco, California, with operations in 785 metropolitan areas worldwide. Its platforms can be accessed via its websites and mobile apps. Uber has been prominent in the sharing economy.

Ride apps like Uber represent the opposite of decentralization, since they essentially operate as dispatching hubs and use algorithms to control their fleets of drivers (and dictate what they charge). Blockchain could inject new options into that dynamic: with a distributed ledger, drivers and riders could create a more user-driven, value-oriented marketplace. Startup Arcade City, for example, facilitates all transactions through a blockchain system. Arcade City operates similarly to other ride-sharing companies but allows drivers to establish their rates (taking a percentage of rider fares) with the blockchain logging all interactions. This allows Arcade City to appeal to professional drivers, who would rather build up their own transportation businesses than be controlled from a corporate headquarters: drivers on Arcade City are free to set their own rates, build their own recurring customer base, and offer additional services like deliveries or roadside assistance.

Now, strategists in Uber are concerned that the company is threatened by the emergence of the blockchain technology.

Business Model Canvas

    (A) Propose two competitive moves that should be taken by Uber to be integrated in their digital strategy? Provide an explanation why and how.

    (B) How will it impact the current business model of Uber? Provide an explanation why.

(16 points)

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2 Governance (12 points)

You are now in the role of a student at the University of Zurich. You are attending the Information Management course where you have to participate in regular quizzes that are conducted via OLAT. However, every time you access OLAT you experience latency issue. The system is running either really slowly, freezes, or crashes completely, even though you have the latest macbook and you are accessing OLAT via the university's network. You are really frustrated since these latency issues with OLAT cost you your bonus points that you could very well use for the upcoming exam. Thus, you decide to call the university's IT Service Hotline. After almost 30 minutes in the waiting line you finally get directed to a first-level support service adviser. The service adviser asks you about your student identification number, your computer configurations, the browser you are using, and he asks you for screenshot to better understand the problem. After a thorough explanation the service advisor makes three solution suggestions: restarting your computer, newly installing your browser, and trying another browser. However, none of them works. The service advisee assumes that the problem might come from network issues, thus, helplessly he suggests to you to contact the network services department. Network services are also part of the IT department however, they are specialized in networking area.

You give it a second try and dial the number you just received from the service advisee ask the department for network services for help with your OLAT latency issues. Unfortunately, only the answering machine replays and tells you that the network services department is only open Mondays and Wednesdays. Today, it is already Thursday and the next quiz in the IM lecture is in a few hours. Thus, you are even more frustrated, since it seems that there is nothing else to be done than hoping that this time the latency issues will not reoccur. A few hours later you try to participate in the quiz, yet the same mistake happens and you are not able to finish the quiz in time given your reoccurring issues with OLAT.

Today it is Monday and directly at 8 am you call the network services department. You are lucky cause you reach somebody right away. You get a bit angry since the employer from network services asks you exactly the same questions as the service advisee did however, at least he seems to be a bit more competent and makes a few tests with you networking settings. Yet, these tests turn out negative (meaning that everything is ok with your network settings) but instead he suggests you to contact OLAT application services. Thus, he transfers your call to the OLAT Team. The OLAT Team is also part of the university's IT department however specialized in the OLAT IT services. Again, the employee asks you the same general questions the other two departments did before. Now you grant the OLAT team remote access and the OLAT administrator employee is now able to check your OLAT application settings. Finally, after less than 5 Minutes the OLAT Administrator found the issue. Your browser was simply not optimized to load the contact correctly. He is a bit surprised and mentions that the 1-st level IT support should have known that, since this is a common issue many students face. The bug is fixed however you are still frustrated since it took you more than a week and the bonus points of two quizzes to fix such a simple issue.

(A) Identify the organizational structure that the Universities' IT department is currently following. What are the underlying reasons for the problems, the students experience?
(6 points)

(B) What organizational development would you recommend to the university's IT in order to improve the above-mentioned service process for students?

(6 points)

3 IT Portfolios (18 points)

In the IM lecture, you have heard about the Ward & Peppard Application portfolio. It is a 2x2 Matrix with four dimensions that enables to maps applications according to their importance to current business and their importance to future business.

(A) Name and briefly explain these 4 dimensions of the Ward & Peppard Application Portfolio.

(8 points)

(B) Imagine that you are the CIO of SBB (Schweizer Bundesbahn / Swiss Federal Railways), the national railways company of Switzerland. You received 5 Projects proposals for the upcoming year 2019. In order to allocate budget and resources it is now your task to prioritize the projects accordingly in the Application Portfolio. Give a short reasoning for your choice.

Project 1 (*Predictive reservation*): A group of developers proposed an application for predictive reservation. Based on many information sources (e.g. prior train rides, private calendar entries, weather conditions, location and movement of the client, explicitly stated preferences ...) the application predicts when the client wants to use a train and makes a seat reservation automatically. Due to a clever combination of information collection and machine learning the application knows that you want to travel before the user knows. Yet, it is unknown what data is needed to make a solid prediction, whether the users are willing to share this data and whether this idea will lead to additional train usage.

Project 2 (*Train menu*): The idea behind "train menu" is the integration of the SBB Bistro Menu to the SBB App. This allows user to view, select and order food and beverages easily via the app, once they are on the train. This way SBB can reduce the paper-waste for the physically printed Bistro-menus and facilitate more online ordering of food and beverages via the app.

Project 3 (*Web-Billeting*): The current online web-billeting of SBB is very outdated and does not fulfill current user requirements like real-time pricing information. Only at the very end of the boking service can users see what the ticket will eventually cost. This makes it hard for users to quickly compare prices of different routes or on different dates/times to find the best price for their needs. Thus, the Project Web-Billeting aims to replace the old applications with a new real-time pricings system that will create a better user experience for SBB clients.

Project 4 (*SBB Mobility Integration*): SBB has recognized the value of becoming an End-to-End Mobility provider. Thus, they partnered with taxis, car rental companies, car sharing companies, rental companies for bikes and trotinettes and other mobility service providers to facilitate End-to-End Mobility service for their customers. They want to bind customers to the SBB-App for end-to-end mobility soon, because they expect Google and others to be capable of entering this market with a few years. Since the Swiss regulatory put increasing pressure to open their scheduling system to competing service providers they have a limited time to gain benefits from their extensive data pool of real-time mobility data.

Project 5 (*Train rider Disposition Management*): The internal disposition management system for train drivers is not working satisfactorily. Train riders complain about poor schedules, last minute calls to work and long waiting times at odd stations before they can continue their work. Train drivers are scarce and their work satisfaction is crucial acquring and retaining them. On the other hand, there is pressure to make SBB train operations more efficient, so not all their preferences for a shift schedule can be taken into account as much as in the past. The proposed solution uses new algorithms to optimise the disposition of train drivers to trains and to increase the overall performance of the system.

(10 points)

4 Planning & Architectures (20 points)

Credito Swiss is currently in a crisis. In the past three years their revenues have been falling drastically and for the current financial year 2018 they are expecting losses. Thus, the management board has assigned the CFO the task to ensure cost cutting in all areas of Credito Swiss. In order to achieve this goal, the CFO proposes measures for each department. You, the CIO of Credito Swiss just had a meeting with the CFO where he explained to you the measures for the IT department. These are:

- A significant reduction of the IT budget for the next year 2019,
- All IT projects that do not pay themselves off by cost savings or increased income within the next 24 months should be stopped (i.e. the benefits within 2 years have to pay off all remaining costs).
- All future IT projects have to pay themselves off within 2 years.
- Currently planned innovation project will be stopped until further notice

You as the CIO are pretty desperate about this drastic decisions and fear that this could cause even further problems for Credito Swiss in the long-term. Thus, you decided to write a mail to the CFO explaining to him:

(A) What these measures would mean for the role of IT.

(4 points)

(B) What long-term consequences you foresee for the development of the Credito Swiss architecture if these measures will be followed through.

(4 points)

The CFO welcomed your initiative and your long-term view and now asks for your advice for including the architecture in his planning.

(C) Explain to the CFO why moving the Credito Suisse architecture to a "optimized core" (from the current "standardized technology") may be more cost-efficient long term solution than the proposed three measures from above.
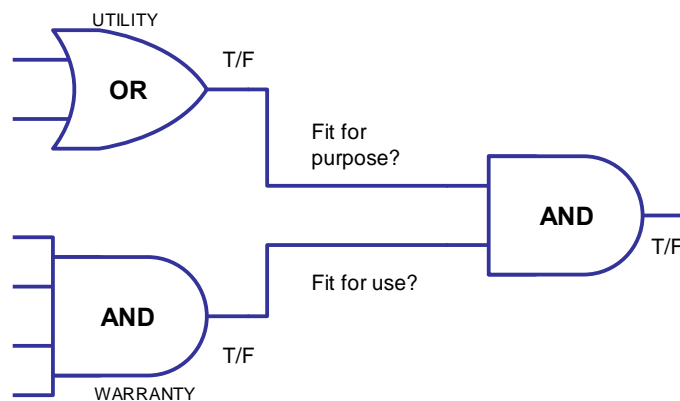
(12 points)

5 Service Management (8 points)

Think about better OLAT Services of the University of Zurich than depicted in task 2. Explain the value creation logic of the OLAT IT Services for its students in order to ensure a service delivery as you as a student would desire it. You can use the drawing below to support your explanation. Please be specific, i.e. do not just complete the figure below with the general statements from the slides in the lecture.

(8 points)

Inputs   Value created

```
        UTILITY
      ┌──────┐  T/F
  ────┤  OR  ├────┐
  ────┤      │    │  Fit for
      └──────┘    │  purpose?
                  │              ┌───────┐
                  └──────────────┤       │
                                 │  AND  ├──── T/F
      ┌──────┐    ┌──────────────┤       │
  ────┤  AND │    │  Fit for use?└───────┘
  ────┤      ├────┘
  ────┤      │  T/F
      └──────┘
      WARRANTY
```

T: True
F: False

6 Innovation (16 points)

Give an example of a real company, that you know, in which generativity fosters combinatorial innovation. First, explain the terms "generativity" and "combinatorial innovation" in your own words. Then, discuss these on the example of a company. Think about an example other than the one discussed in the lecture.

(16 points)