University of Tartu – Institute of Computer Science

MTAT.03.231 – Business Process Management

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Project – Order-to-Cash Process at Fotof

Due dates: Tuesday 28 May at 10am (the report must be submitted by 10am, followed by oral presentation between 10:00 and 14:00)

Teams: 3 or 4 members (preferably 4). We strongly recommend that each team should have at least one member from the Masters of Innovation and Technology Management and at least one member from the Masters of software engineering, to cover both the technical and business parts of the project.

Worth: 25 points

Task

Your task is to model, analyse, re-design and automate a booking-to-cash process at a photography company. A narrative description of the "as is" process is given below. You must take this description as the basis to analyze the process, identify improvement alternatives and to design a to-be process. If you find that the description below is not detailed enough, you can make your own assumptions.

The first step is to understand the "as is" process model. To this end, you are asked to design a detailed BPMN process model reflecting the current state of the process. This BPMN model should not only deal with the "normal course" of action, but it should also show how different types of errors or exceptions are handled, including changes, cancellations and over-due invoices.

Next, you should identify wastes in the process as well as major issues. The latter should be assessed and documented in an issue register. The "issue register" should include the following columns: Issue Priority Number, Issue Name, Short Description, Data/Assumptions, Quantitative Impact and Qualitative Impact. The issue register should not be an inventory of every possible issue you can think of. Instead, you should focus on major issues that capture the concerns expressed by the customers, staff and management stakeholders.

Based on the identified issues, you should then design a "to-be" process model in BPMN and explain what changes are you proposing and how would these changes address the identified issues, and/or how they would contribute to achieving the company's strategic goals.

In addition to proposing a to-be process model, your team must build a mock-up application using a business process management system (e.g. BizAgi). The purpose of this mockup application is to demonstrate how the to-be process could be automated and how would this automation affect the way the participants in the process do their work. You are not expected to deliver a "ready-to-be-deployed" system, but rather a "demonstrator". You can keep it simple (treat it as a "sketch").

What to Submit?

You should submit (via the course Web page) a report in PDF, RTF or OpenOffice format, containing the following sections:

1. A title page including the full names of all team members.

2. Waste analysis

3. Issue register

4. A description of changes your team suggests to make in the "as is" process. For each proposed change, you should explain why do you suggest that change, and which issue(s) it would help to solve, or how would the change help to address the company's goals. You should also analyse the feasibility of each change, e.g. what upfront or ongoing costs/investments it would require and how likely it is that the improvements the change will bring will offset the associated costs.

You can submit a classical report in portrait A4 format, or you can format it as a slide deck. You can (and should) use your report as a basis for your oral presentation.

In addition to the report, you should submit (in the same zip or rar file):

- The "as is" process models in PDF (please also share the models with marlon.dumas@ut.ee if you use Signavio).
- A Bizagi database dump (".bak" file).

Your team should give an oral presentation on 28 May during the lecture time-slot. Each team will be given 10 minutes. Only one team member needs to present. We will send a Doodle poll about a week before the presentation date to allow you to schedule your time-slot.

Grading

- As-is process model: 5 pts
- Waste analysis: 3
- Issue register: 4
- Redesign: 4
- Implementation: 5
- Presentation+demo: 4

Scenario

Fotof provides photography services in the fields of family photography, personal event photography (e.g. weddings and party photography) and commercial photography (mainly corporate events photography). With a portfolio of 25 photo studios, Fotof Studio is the largest chain of photo studios in Northern Europe. Fotof's 2018 turnover was 17.6 Million euros, out of which 25% from sales to corporate customers and the rest from private customers.

One of core process of Fotof is its booking-to-cash process, which goes all the way from the moment a customer makes a booking for a photo shooting session, through the order placement, and up to the moment the customer pays and obtains the ordered pictures. In 2018, Fotof received 10K orders from corporate customers, and 80K orders from private customers.

Booking-to-cash process

The process starts when a customer makes a booking for a shooting session at a photo studio. A booking can be done via phone or via e-mail addressed directly to a specific photo studio. The request is handled by a customer service representative at the photo studio. Each studio employs two customer service representatives: a senior one, who is also manager of the studio, and a junior one. The customer service representative enters the details of the booking into the photo studio information system. The entered data includes

- Customer data (full name, phone number, e-mail, and if applicable company name, company address and company registration number for invoicing purposes)

- Booking data: start of the session, duration, type of shooting (family, personal event or corporate event) whether the shooting session is in-studio or "on location", special equipment required (e.g. lighting equipment)

The booking is assigned to one of the photographers of the studio (there are on average 3.5 photographers per studio). On average, an in-studio session lasts 45 minutes, while an on-location session lasts 3.5 hours (including transportation time). 20% of private customer shootings and 100% of corporate customer shootings are on-location.

After a photo shooting session, the photographer uploads the pictures to a file server. Eventually, a technician (2 technicians per studio on average) cleans up the pictures by deleting duplicates and failed shots. Later the technician edits the remaining shots and arranges them into a photo gallery using a dedicated photo studio software tool. Once the gallery is completed, the customer is notified by e-mail. The notification includes an URL where the customer can find the pictures.

Customers can view the gallery, select the pictures they wish to order in print (and how many copies) and those they wish to get in digital copy (full resolution). Customers can also annotate a selected picture in order to ask for additional editing (special requests). When placing their order, customers can specify whether they will pick-up the printed copies at the studio or have them delivered by post. In the latter case, a shipment fee is added to the order. Customers can also enter a "discount code" when placing their order. Fotof offers discounts of between -10% and -20%. Around 10% of orders are placed with a discount, and the average discount is 15%.

Once the customer has placed an order, a technician performs additional editing (if required by the customer). In the case of special requests, the technician may need to communicate with the customer by e-mails or phone to clarify the request and to determine how to fulfill it, and whether the special request will entail an additional fee and how much. If printouts are required, the technician prints them out, puts them in an envelope and drops them in the studio's counter. Digital copies are placed on a dropbox folder with the order number (but the link is only shared with the customer after payment).

Once the pictures are ready, a customer service representative determines the amount to be invoiced (including additional fees for special requests, and discounts), produces the invoice and sends it to the customer.

The customer can pay their invoice by bank transfer or directly at the studio, for example when they come to pick up printed copies. When a customer service representative detects that payment has arrived by bank transfer, they mark the corresponding order as paid. If required they pack and send any printouts orders for postal delivery and if applicable they send the Dropbox link with digital copies to the customer.

Pictures from a shooting session are kept in the corresponding gallery for up to 30 days (a reminder is sent to the customer 5 days before the expiry date). If a customer has not placed an order past this period, an invoice is sent for the minimum billing amount (see below). Invoices are payable within 7 days of their issue. A customer service representative sends a reminder in case they detect an overdue invoice. Similarly, a customer service representative sends a reminder if they detect a customer has not collected printouts more than 7 days after these have been ready for pickup.

Booking or order cancellations can occur in three ways: (i) prior to the shooting session (booking cancellation); in case of no-show (the customer did not show up to the shooting session and did not re-schedule it); or (iii) after the shooting, if the customer does not order any pictures within 30 days. Cancellations prior to the photo shooting session do not incur a fee. Cancellations due to no-shows do not attract a fee if they are in-studio; they attract a fee of EUR 50 if they are "on location". In case of a no-show, the customer may re-schedule the booking to a later day but the no-show fee for on-location shootings is charged to the customer in any case. If a customer does not order any

picture after a shooting session, the customer is invoiced a photo shooting fee of EUR 120 for in-studio sessions (EUR 160 for on-location one).

Stakeholder analysis

Customer viewpoint. In 2018, customer satisfaction stands at 80% (declining from 85% in 2017) and net promoter score at 70% (declining from 80% in 2017).

Common customer complaints exist in regards to: (i) turnaround times between the photo shooting session and the availability of pictures for review, as well as the turnaround times for delivery of digital copies and printouts; (ii) turnaround times for resolving customer complaints particularly with regards to perceived defects in the delivered digital and printed copies; (iii) mishandled or "forgotten" orders or special requests. Customers often make changes to their orders or additional special requests via phone or e-mail and these changes/requests are sometimes not recorded (or recorded incorrectly) in the order management system. Changes to orders are currently handled manually.

Staff viewpoint. Staff satisfaction with the current process is low. Over 60% of customer service staff consider that their job is stressful. The staff turnover rate overall is at an all-times high: 20% of staff involved in the process as of 1 January 2018 had resigned by 31 December 2018, up from 10% the year before, with more than 80% of the resignations coming from customer service staff and the remaining from photographers and technicians. The average Cost-To-Company (CTC) of a photographer at a Fotof studio is 41K per year (35K for technicians and 37K for customer service staff). The CTC at Fotof is generally in line with industry averages. The company additionally employs 20 staff at the company headquarters at an average CTC of 46K.

Interviews with staff have highlighted the following issues in the process:

-   Customer service staff perceive that appointment management is too time-consuming. Customers sometimes call or e-mail multiple times to find a suitable appointment time. Customers also call frequently to change their appointments for shooting sessions or to cancel their session. About 1% of corporate orders result in a cancellation prior to the shooting, while 5% of private orders are cancelled prior to the shooting.

-   The late-show and no-show rates for appointments are rather high: 10% late-shows for in-studio sessions, 2% for on-location sessions, 3% of no-shows for on-studio sessions, and 1% for on-location.

-   There are numerous customer enquiries via phone and e-mail (on average 3 per order, in addition to booking-related calls or e-mails), be it to enquire about the status of orders or deliveries, to make changes to the order, to discuss special requests, pricing questions, as well as to report complains with received pictures. There are also numerous inquiries regarding shipment and delivery (shipment via traditional postal service is a cumbersome process and the delays it causes are a visible source of inquiries and complaints).

Management viewpoint. The company strategy of Fotof for the years 2019-2021 is focused on revenue growth. The company seeks to achieve a revenue increase of 50% by end of 2020 relative to 2019. This growth should be achieved organically, meaning via growth of the existing business, without company acquisitions and without opening additional retail outlets. To achieve this goal, Fotof's management is receptive to ideas to improve customer service and to expand the range of added-value services, such as offering "slideshows" to customers of personal events, creating customized artistic galleries, allowing customers to easily order reprints of photos, etc.

Fotof's management perceives that additional revenue could come in great part from wedding photos, parties and ceremonies and targeting kindergarten and school events. At present only the customer who initiates the booking can place orders. But in the case of personal events and if the customer consents, there is an opportunity to sell to other event participants. Fotof's management

also perceives that faster cycle times could also help to enhance sales. Sending more frequent reminders to customers to place their order, or re-organizing work to reduce cycle time are options that could be considered. In any case, the manager is very sensitive to ideas on how to create capacity to create or enhance existing revenue streams, while making sure that the existing revenue streams remain strong. Avoiding customer churn is a major concern as well given that the Cost Acquisition Cost (CAC) for brand new customers is in the order of 50 euros, versus a customer lifetime value (CLV) of 250 euros. Improving retention rate and, if possible, reducing CAC are key strategic drivers. Fofot's management believes that cross-selling and up-selling are crucial to achieving the company's objectives.