



Business Process Canvas as a Process Model in a Nutshell

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Abstract. The paper suggests using a business process canvas as a model of a process in a nutshell that presents the essential properties of the process and the context in which it is run, including the position of the process in the business process ecosystem. The canvas consists of three sections: positioning, operations and resources. A positioning section, called Outside, includes such components, as the purpose of the process existence, strategic goals (to be) achieved by having the process, related processes and mechanisms of initiation of new process instances. The operations sections, called Inside, gives an overview of the work of the process instance, and it includes such components as operational goal, milestones, main events and activities, outcomes and constraints. The resources section, called Resources, describes resources/assets used in the process instances, and includes such components, as participants, tools, methods, etc. The paper proposes a canvas layout, describes its components, and presents an example. In conclusion, the paper discusses areas where the canvas could be used in practice.

Keywords: BPM · Business process · Business process modeling
Canvas · Goal · Context

1 Introduction

Patric Hoverstadt, in [1] writes “It is now very common to find organizations where as soon as you scratch the surface you discover that nobody really understands how the whole business works”. In the same article, he also highlights “the need for an architectural model that provides business leaders with a model of the enterprise that they can genuinely use to understand how it operates”. We believe that these reflections are valid not only for the whole business, but also for a complex business process, especially if it stretches over the whole enterprise/organization and crosses the boundaries of departments and teams. Any decision related to a particular process, e.g. redesign, optimization, introducing a new IT system to support the process, requires understanding of the process. This understanding includes not only particular details of how it is currently run internally, but also why it exists and how it is related to other processes, i.e. its position in the business processes ecosystem.

There are many ways to model a business processes, such as workflow modeling [2], state-oriented modeling [3], data-centered and artifact-centered modeling, etc. However, all these modeling techniques concern representing the particulars of internal

behavior of the process instances, and do not depict all relevant details of the context. Besides, all these techniques use complicated diagrammatic languages that make it difficult to grasp the main characteristic of the process. As far as relationships between the business processes are concerned, there are a number of techniques related to process architecture [4–7] that explicate the relationships between the processes. However, these techniques have no ways of expressing the internality of the process, and, again, they use a rather complicated diagrammatic way of presentation of the process relationships.

The question arises whether there could be found a way/technique to represent both sides of the process, its position inside the enterprise and its internal features so that a process model built with this technique could be used for decisions related to the process in question. Such a model should present essential internal and external features of the process without overburdening it with details that are needed for implementing the decision, but not for making it. The goal of this idea paper is to suggest one such technique, which we call Business Process Canvas or BPC for short.

The development of BPC has been inspired by Business Model Canvas (BMC) [8], which, in our view represents an enterprise model in a shell. BMC represents both sides of the enterprise, its internalities, e.g. main activities, and the context, e.g. who are the customers and main partners. Different parts of the canvas need to be aligned with each other, for example, a value proposition should be attractive enough to at least one market segment. However, this alignment is not represented in canvas itself, but is assumed by the creator and the reader of a business model. The model is quite informal, and requires general knowledge about the enterprise/organizational world from its reader, but this is exactly what the managers have. The mentioned above features are the main reason of the popularity of BMC in the business community. BMC gives a concise overview of the business that can be used in the decision-making. In this paper, we are applying the same idea as is embedded in BMC to the realm of business processes, i.e. having a business process model in a nutshell, which is not fully formalized, but which highlights the important parts of the process context and its internality.

To check that such a modeling technique had not already been proposed, we searched the Internet on various combination of keywords *business process* and *canvas*. During the search, we did not find any match in the sense suggested above. The nearest we came to was Process Model Canvas (PMC) [9], but this canvas is designed for helping to build a standard process model, rather than serve as a process model in a nutshell itself. We also found other canvases related to business management, e.g. Operating Model Canvas [10], but none of them was aimed to represent a business processes.

A similar to the canvas concept is a business-oriented template. Such templates are used both in academia, e.g. [11] and practice [12]. While the former refers to a work system, which is more general than a business process, the latter concerns business processes. Usually, such a template has a form of a table that can be quite long, 31 pages in [12]. The absence of the layout in the table-based template makes it difficult to see the connections between its various components which is needed for the template could be considered as a process model in a nutshell. So far, we have not found any process model template that could be used for this purpose. Actually, the goals when

designing these template are different, being connected to a specific business task, such as business analysis [11], or process design [12].

The rest of the paper is structured in the following way. In Sect. 2, we briefly overview our research approach and knowledge base used in the development of BPC. In Sect. 3, we describe the canvas layout and each of its sections. In Sect. 4, we present an example of a process and a canvas that corresponds to this process. In the concluding Sect. 5, we discuss possible areas of applicability for the BPC.

2 Research Approach

The research presented in this paper belongs to the Design Science (DS) paradigm, [13] which seeks new solutions for problems known or unknown. In particular, we use the DS interpretation suggested in [14]. Using DS is natural for this research, as the objective is to develop a new way of depicting a business process. The problem the research addresses is to have a business process model that depicts both the process context, i.e. a position of the process in the enterprise ecosystem, and important internal characteristics of the process. The requirements on a new way of modeling the process are to have a model in a nutshell that includes important components/characteristics of the process, but is not overburdened with details. The primary usage of the new modeling technique is human decision-making, thus there is no requirement on the model to be formal.

The proposed solution, or artifact in terminology of [13], is a business model canvas – a set of concerns with a specific layout, that allows to write a text in a natural language related to a specific concern. There is a logical connection between the categories, which is explained, but not expressed in a formal way, e.g. with arrows. When designing the structure of the canvas, we used the knowledge base on business processes from the literature, as well as own experience in analyzing, modeling and supporting business processes. The literature sources are referred to in the next section when describing the structure of BPC. Note that due to the limitation on space, we could not refer to all relevant literature.

The major concepts used for designing the canvas are as follows. The canvas utilizes the duality of the concept of business process that encompasses two sub-concepts: (1) business process instance, otherwise called case or run, and (2) business process type. While the first refer to a particular chain of events with a particular goal, like selling a Volvo S70 to Sven Anderson, the second refers to all process instances of the same kind, e.g. selling personal cars to private customers at a given car dealer. Based on this dichotomy, two distinct systems can be identified in relation to the business process:

1. A temporal system that corresponds to a process instance, which is created at the process start, and disbanded when the goal of the instance has been achieved [4]. This is a respondent system in terminology of [15].
2. A permanent socio-technical system that is responsible for starting and monitoring process instances, and supplying them with resources/assets needed for attaining the instances operational goals, such as people, tools, procedures, etc. [16].

The differentiation underpins the layout and structure of the canvas presented in the next section.

3 The Structure of the Business Process Canvas

The canvas layout we designed is presented in Fig. 1. The layout uses colors to differentiate three distinct sections called:

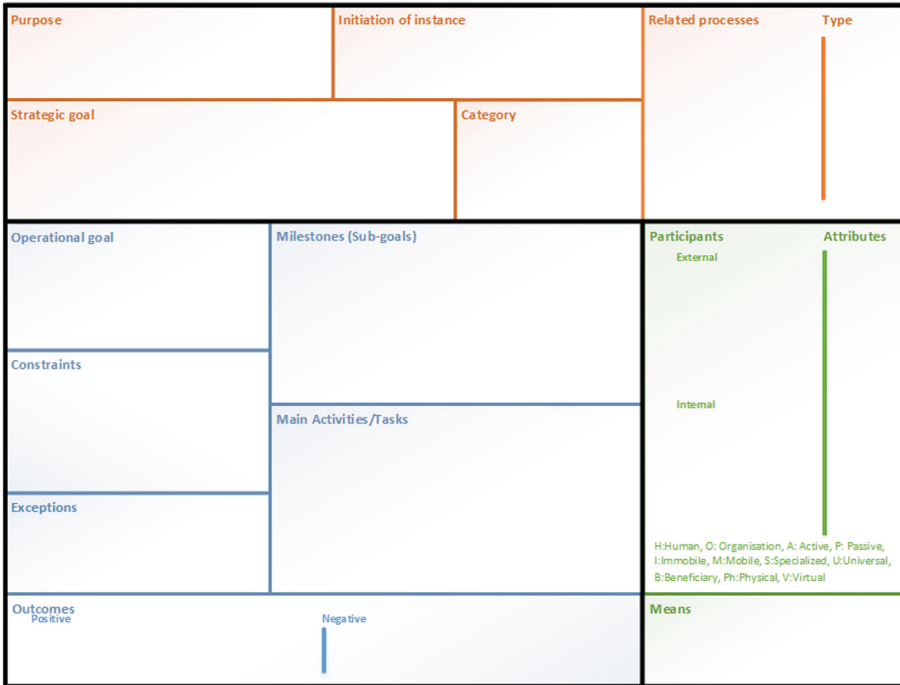


Fig. 1. Canvas outline. (Color figure online)

1. *Outside* – upper part of the canvas marked with the orange color
2. *Inside* – left bottom part of the canvas marked with the blue color
3. *Resources* – right bottom part of the canvas marked with the green color

The distinction between *Outside* and *Inside* is based on the distinction between the process type - *Outside*, and process instance – *Inside*. The outside section of the canvas describes the characteristics and the context of the system related to business process type, e.g. why the process exists, which processes are related to it, etc. In other words, *Outside positions* the process in the ecosystem of the enterprise. The inside section of the canvas describes the characteristics and the context of instance system, e.g. what the operational goal of the individual instance is, which activities/task are completed, etc. In other words, *Inside* presents the details of the instance *operation*. This part can be

considered as a generic model of an instance that is valid for any instance of the given type. The third section describes resources engaged in the process instances, such as process participants, tools, specific methods or methodologies, which are provided by the type system to the instance systems.

In the sections below, we describe each of the canvas sections in detail by listing and explaining its components and providing examples of how to fill them.

3.1 Outside Section

The *outside* section describes the characteristics and context of the type system, and includes *Purpose*, *Category*, *Strategic goal*, *Related processes* and *Initiation of instances*, that are described below.

Purpose. The primary aim of the process - a general description of why the process exists, without including detailed information, e.g. delivering ordered books to the customer, hiring factory workers, training new employees, providing guarantee and after guarantee service to sold process, etc.

Strategic Goal. A strategic goal adds details to the purpose and lists additional goals that should be achieved by a process if it is properly designed, e.g. ensure getting profit, or using the existing resources, or using partnership with somebody else. It can also include ensuring compliance with current regulations. In addition to the purpose, the strategic goal explains why the process is or should be driven in a particular way [3].

Note that the concept of purpose and strategic goal is a topic much discussed in the literature, though without splitting the concept into two parts. For example it appears in [17] under the name soft goal and in associating to the process type. The soft goal explains why the process exists or should exist in an organization. According to [18], a goal refers to an attainable, measurable and time-bound state of the world that should be achieved or/and sustained. [19] states that the definition of business process goals should initiate the questions “What are we trying to achieve?” and “What are we trying to avoid?”. Therefore, defining goals could be done as statements of what the business process is aimed to achieve or avoid. Goals may be qualitative or quantitative. Quantitative goals are easily measurable through some value that should be achieved, while qualitative goals require human judgement to verify whether the goal has been achieved [20]. However, in both cases, there are some important attributes that need to be included when stating a process goal which have been summarized by [18]. These are: attainability, measurability and time-boundedness. Strategic goals tend to be long term goals and are usually stated qualitatively [18].

Category. A classification of the process in one of three types: *Main*, *Supporting*, *Strategic*. The classification of processes in main and supporting can be found in many works. Here we follow the definitions presented in [4], i.e.:

- *Main* – the process that delivers value to the customer/beneficiary, e.g. providing a service.
- *Supporting*, the process facilitating or enable the execution of other business processes. In [4] supporting process is aimed at managing assets/resources used in other processes, e.g. hiring or training the company staff.

To this two we added a category of *strategic* processes aimed at introducing a radical change that can affect the whole organization, including creating new business processes or discontinuing the old ones [21].

Note that a process can belong to more than one category. For example, a service for sold products provides value to the customer (Main process), but it can also be viewed as a supporting process for retaining the customers (which is an asset of the main process [4]). The category is tightly connected to the *purpose* and *strategic goal* of the process.

Initiation of Instances. This component describes the way(s) of how a process instance can be initiated. The description can be a reference to an externally initiated event, e.g. a customer call, or to a situation detected by another process, e.g. a customer prospecting process identifying a potential client against which a sales process instance is initiated.

In a general way, initiation of instances could be defined as a set of conditions that identifies a situation that triggers creating a respondent system – process instance. In a simple case, detecting the triggering situation could be a simple matter: the customer calls and expresses an interest in the company’s product or services. In more complicated cases, a monitoring process is required to detect a triggering situation, e.g. customer prospecting, see the discussion on this issue in [21]. Despite the differences, all ways of triggering can be presented as conditions.

Note that *initiation of instances* is not the only component that can be described as a set of conditions. Other components, such as operational goal, milestones, constraints, exceptions, and outcome could also be described in form of conditions (see Sect. 3.2).

Related Processes. The processes that exist in the organization and that are directly or indirectly connected to the given one, together with their types. The *type* of related processes has the same meaning as *category* discussed earlier, another label being used to avoid confusion when reading the canvas.

Listing related processes is important for process change management [17]. Introducing changes in the given process may require changing related processes so that the whole process ecosystem remains in balance.

The Fractal Enterprise Model [4] could be used for identifying, at least part of, related processes. Supporting processes that manage assets for the given process can be listed as related processes. For example, the sales process that delivers new customers (an asset) to the service process can be listed as a related process to a service process. One can also go in the opposite direction listing as related a process which asset the given supporting process manages. For example, the process of hiring workers (an asset) for the factory floor could have the factory production process listed among its related processes.

3.2 Inside Section

The *inside* section describes the characteristics and operation of the instance (respondent) system, and includes *Operational goal*, *Milestones*, *Main activities/Tasks*, *Constraints*, *Exceptions* and *Outcomes*, that are described below.

Operational Goal. An operational goal defines what an instance of the given process type is aimed to achieve. It can be expressed as a condition on when the instance could be considered as finished and the instance system can be disbanded [3]. For example, for the order handling process the goal can be defined as the ordered goods delivered to the customer and a sum of money agreed upon is received. The conditions should include all possible outcomes (legitimate ends) of a process instance, after it starts, including the customer returning the goods and the company returning the money. Some of these ends are considered positive, others - negative, which are discussed in the text under the *Outcomes*.

Another term used in the literature for *operational goal* is *hard goal* [17] being associated with the process instance. Achieved operational goals, especially with positive outcomes, can be considered as short-term contributions to strategic goals. In addition, they provide a means to measure the progress towards the achievement of a strategic goal [18].

Milestones (Sub-goals). A process instance starts with the conditions of initiation, and ends with the conditions defined by the operational goal. As the transformation cannot be done in one go, there are a number of intermediate process instance states that could be controlled in the frame of the process instance. These are often called *milestones*, and they represent sub-goals to be achieved on the way to achieving the operational goal of the given instance. For example, for an order handling process, such milestones could be *order received*, *goods delivered*, *money received*.

Note that other works, e.g. [22], treat goals in connection to activities, i.e. as attributes of activities. The activities are decomposed to sub-activities, tasks into sub-tasks and goals into sub-goals. We consider the milestones/sub-goals as primary elements of the process description, while activities are considered as the way of attaining the goal or one of sub-goals. This does not create any contradiction, as [22] allows defining several activities for reaching the same (sub-)goal.

Main Activities/Tasks. This component lists the most important actions performed by participants during the execution of a process instance. For an order handling process, these could be taking order, modifying order, packing, invoicing etc.

In the mainstream business process literature, activities/tasks are considered the main components of the process definition. For example, according to [23] a business process consists of parts with a well-defined order which are known as activities. They can be atomic or composite and they can be performed by one or more participants. [24] defines business process activity as a series of units of work or actions that are included in a process or a series of tasks. A task is defined as a special case of activity that involves a single unit of work or action. In our view, activities/tasks are just means of attaining sub-goals, thus only main activities are listed in the canvas.

Constraints. A set of conditions that impose constraints on how the process instance execution is driven. The condition can be expressed in terms of milestones, activities or both. For example, no product delivery before payment is received establishes the order of attaining the sub-goals, i.e. before starting activities aimed at the milestone *goods delivered*, the milestone *money received*.

Constraints in relation to business processes are much discussed in the business process literature, often under the name business rules. Business rules describe policies, procedures and limitations that concern an organization aiming to achieve its business goals and objectives [25]. They are intended to assert business structure, control or influence the behavior of the business [26]. Business rules can be defined formally and informally. In the context of the canvas, only informal definitions are used.

Exceptions. The term refers to an abnormal situation in the instance development. It can be an unexpected event, like the customer calling and complaining that goods have not arrived, or absence of an event, like money not arriving in time on the company's account, or an activity that should be executed by a certain deadline has not been executed without any information on the delay and its cause.

Listing the most common exceptions in the canvas aims at raising awareness of the needs that they should be handled.

Outcomes. This is a way of classifying legitimate endings of process instances as positive and negative outcomes. For example, delivering goods to the customer and getting paid with a profit margin without exceptions and delay can be considered as a positive outcome. The customer canceling the order, or returning goods could be considered as a negative outcome.

Classifying the outcomes as negative and positive is quite known in the literature, see for example, definitions from [24]:

- Positive outcomes, when the result of the process indicates that the process instance execution successfully delivers value to one or more beneficiaries.
- Negative outcomes, when the completed process instance execution has failed to deliver value to any beneficiary or has only delivered partial value.

3.3 Resources Section

The *resources* section describes physical and virtual objects (things) that are engaged in the process instances. It includes two components *Participants* and *Means*, which are described below.

Participants. Participants are entities that perform activities and tasks during a process instance execution or/and are directly affected, e.g. being transformed by these activities and tasks. Participants that perform actions are called active participants (actors), while participants that are affected by actions are called passive participants in terminology of [27]. A participant can be both active and passive, for example, a patient in the hospital can be considered as both passive and active participant in the process of medical treatment, while, a doctor is purely active participant in this process. The same could be said about a student taught in a school.

In many cases, participants are not identified by a reference to a specific entity, but rather by a reference to a class (role), e.g. a doctor, a patient a student, a teacher etc. Furthermore, a participant may be an individual, e.g. a human or a robot, or of an aggregate type, e.g. an entire organization or an organizational unit. An organizational unit is a set of individuals and systems grouped through a set of characteristics or units that share the same kind of functionality in an organization [23]. Considering

organizational units as active participants actors is quite common in the literature, for example, [17] define an actor as an entity or organizational unit that is involved in the execution and realization of a business process.

Beside categorization active/passive, participants can be categorized as internal or external participants based on whether they are based within the organization or organizational unit or part of the process's external context. Examples of internal participants include employees, managers and CEOs. Examples of external participants include suppliers, investors or customers [17]. Customers also belong to a special case of participants that receive the value produced by the execution of a process instance. This special type of participant is called beneficiary in [4].

Active participants can be further categorized based on their level of specialization, see [27], as:

- totally universal, when they have no specialization in any of the process activities or tasks
- totally specialized when they have absolute specialization in the performance of certain process activities or tasks
- any state in between

Both active and passive participants can be characterized by their degree of mobility, see [27], as:

- totally immobile, when they cannot be moved to another location
- totally mobile, when they can be moved without substantial costs
- any state in between

Passive participants can be further categorized based on their status of physicalness, see [27], as:

- physical, when they are material and tangible
- virtual, when they are immaterial and intangible

In the *participants* component of the canvas, main participants are listed along with initial letters that correspond to their attributes discussed above. A legend at the bottom of this canvas component includes all the attributes that are deemed essential for decision making related to a particular business process.

Means. Means are tools, techniques and methods used by process instance participants to perform activities and tasks during the execution of an instance. Means corresponds to the control elements of a respondent system [15], see also [4]. Typical examples are email, eXcel, ERP, CRM, SCRUM, Lean, Three sigma etc.

In the terminology of fractal enterprise model [4], tools include assets of the infrastructure type and executable templates, e.g. process maps, operational manuals, etc. In a similar way to categorization of passive participants, tools can also be categorized according to their mobility and physicalness. Examples of physical tools include factory equipment, printed documents and vehicles, while examples of virtual tools include software and manuals in digital documents. The canvas component associated with tools does not require adding attributes letters to the tools names,

though the tool name and its short description could indicate which attributes they have.

4 An Example

In this section, we demonstrate how to fill the canvas using a process from a business case used for teaching state-oriented business process modeling [28]. Information about the process itself and its context is available in forms of interviews with the stakeholders of the company that intends to run the process. The interviews in a voice recorded form, and other background information is available from [29]. Both the interviews and background information are real, except that the name of the company has been changed.

Harmony Inside AB is a Swedish company that provides services and products to the individuals who suffers from Irritable Bowel Syndrome (IBS) using the FODMAP method. The company is a startup coming into the growth phase. It was started by two dietitians that are now expanding their business and moving it to the web. The products and services include cooking recipes, food store, books, general advice, an online course and individual consultations.

The chosen method of payment is membership with monthly fees. There are three levels of member subscription: Starter, Standard and Premium. The first two levels concern one way only interaction, cooking recipes, general advice, an online course and some other services. The third level of membership includes individual consultation and treatment by a dietitian through an online platform. The process of providing such consultation and treatment is used as an example in this paper. The canvas for this process is presented in Fig. 2, and its components are listed and explained below. Note that we did not try to fully fill all components, only representative examples for each component are presented in the canvas.

Purpose. The purpose of the process is to provide individual consultation and treatment to the premium members with the goal to improve their wellbeing.

Strategic Goal. There are more than one strategic goals associated to the online consultation process. First of all, the company aims to attain profit in a geographically widespread market, not only in Sweden but also in other countries, by using effectively local and distance resources to provide personalized services. Another goal is to retain its clients as subscribers for other services provided by the company by providing personalized services of the highest quality. Finally, the company aims to acquire more knowledge on effective ways of treatment that can be used in order to improve the efficiency of the currently available treatment.

Category. The online consultation business process can be classified as a main process since it exists to provide value to its beneficiaries.

Initiation of Instance. The process instance execution is initiated when an eligible customer requests to participate in the online consultation service.

Purpose To provide individual consultation and treatment to the premium members with the goal to improve their wellbeing.		Initiation of instance An eligible client requests online consultation service.		Related processes Client subscription		Type Support	
Strategic goal 1. Attaining profit via providing personalized service in geographically spread market, in Sweden and outside employing non-local working force (dietitians) where there is lack of it locally using effectively limited local and distance resources 2. Retaining clients for other services provided by the company (after getting good personalized service, the client might stay longer as a subscriber) 3. Acquiring knowledge on effective ways of treatment that can be used to improve the efficiency of the process/service				Category Main process			
Operational goal To improve the wellbeing of the client by alleviating the client's IBS symptoms.		Milestones (Sub-goals) 1. Data on the current state of the client obtained 2. Treatment suggested to the client 3. Treatment tested by client 4. Treatment round evaluated.		Participants External Client		Attributes HAPB	
Constraints <ul style="list-style-type: none"> No treatment can be suggested until a client profile has been created. At least one week of treatment testing should pass before treatment evaluation. 		Main Activities/Tasks 1. Obtain data on client health and create habits profile. 2. Recording personal treatment progress. 3. Creation of nutrition diary. 4. Discussion. 5. Evaluation and personal treatment suggestion. 6. Application of treatment. 7. Evaluation of personalized treatment. 8. Book meeting. 9. Meeting and taking notes.		Internal Dietitian		HAS	
Exceptions <ul style="list-style-type: none"> Client refrains from communication with the dietitian. The client is not cooperating. 				H:Human, O: Organisation, A: Active, P: Passive, I:Immobile, M:Mobile, S:Specialized, U:Universal, B:Beneficiary, Ph:Physical, V:Virtual			
Outcomes Positive The client has tested individual recommendations and discovered that they help.		Negative Both the client and dietitian decide to stop trying after one or several unsuccessful attempts.		Means <ul style="list-style-type: none"> online platform Recipe book FODMAP 			

Fig. 2. The Harmony Inside online consulting business process in a nutshell using the BPC.

Related Processes. One process that is related to the online consultation is the client subscription process. More related processes exist, but we limit ourselves to one in this example.

Operational Goal. The operational goal of a process instance is to improve the wellbeing of the client by alleviating the client’s IBS symptoms. The instance ends when the client has tested individual recommendations and discovered that they help, or both the client and dietitian decide to stop trying after one or several unsuccessful attempts. The first case represents a positive outcome, while the second – a negative one.

Milestones. The following milestones are identified for this process: (i) data on the current state of the client obtained, (ii) treatment suggested to the client, (iii) treatment tested by client, and (iv) treatment round evaluated.

Main Activities & Tasks. The main activities and tasks that are performed during a process instance execution are (i) obtain data on client health and create habits profile, (ii) recording personal treatment progress, (iii) creation of nutrition diary, (iv) discussion, (v) evaluation and personal treatment suggestion, (vi) application of treatment, (vii) evaluation of personal treatment, (viii) book meeting and (ix) meeting and taking notes.

Constraints. Examples of the constraints for this process include:

- No treatment can be suggested until a client profile has been created.
- At least one week of treatment testing should pass before treatment evaluation.

Exceptions. For this process, two typical exceptions are presented in the canvas: (1) the client unexpectedly refrains from communication with the dietitian, (2) the client is not cooperating, e.g. not following the treatment recommendations.

Outcomes. See two outcomes mentioned in the operational goal.

Participants. There are only two participants in this process. The dietitian, who bears the attributes, Human, Active and Specialized and the client who bears the attributes Human, Active, Passive and Beneficiary. Both participants are performing actions in an instance; however, the client is also being changed by these actions, therefore, bears, both the active and passive attributes. In addition, the client is the one that receives value from the process, being a beneficiary.

Means. The means that are used during online consultation are the online platform that enables interaction, the recipe books, used to provide recipes, and the FODMAP method.

5 Conclusion - Areas of Applicability and Future Research

5.1 Contribution

The main contribution of this paper is developing an idea of having a business process canvas as a business process model in a nutshell. To the best of our knowledge, such an idea has not been suggested before. The nearest suggestions in the form of business model canvas [8], and operating model canvas [10] were not designed having the “nutshell” purpose in mind.

When developing the nutshell idea, we decided on sections - *Outside*, *Inside* and *Resources* - and their content, as well as the canvas layout, which is presented in Fig. 1. The development of the idea is in its initial phase; thus, we do not insist that the canvas presented in Fig. 1 is the final one. Though we believe that the sections we identified are the right ones, the components of each section and the canvas layout are subjects to further development and revision. What we wanted to demonstrate in this paper is that such a canvas can be rationally built.

5.2 Possible Areas of Application

As has been discussed in the introduction, the main motivation of creating a BPC is to give the management a model of business process that they understand and can use in decision-making. Thus, the first area of application of BPC is **decision making**. For this end, the canvas should be fully built, so that the decision related to the given process could be debated and made. The main idea is that all parts of the canvas should

be in balance. The canvas can be used for finding a cause of problems in the process and for planning changes.

Finding a cause of a problem consists of investigating whether all parts of the canvas correspond to each other. For example, if a strategic goal lists “being flexible in relation to the customer needs” and the constraint component sets many constraints on the instances’ behavior, there clearly exists a contradiction that should be removed. Either constraints should be revised, or flexibility should be removed from the goals.

Planning the change is done by introducing changes in one or several components, and then removing the contradictions that appear by adjusting other components. The latter may concern introducing changes in related processes.

The second area, where BPC can be used is a preliminary phase for **process modeling**. While investigating the process of creating process models, [30] identified that prior structuring of domain knowledge significantly affected in a positive way both the outcome and the process of process modeling, when casual process modelers are concerned. In addition, certain casual process modeling professional roles choose a faster method that employs graphical approaches and the use of post-its and textual notes, in other words, the Canvas approach [31]. The suggested canvas, along with any similar canvas approach, not only depicts a process in a nutshell, but also provides a process modeler with a structuring of domain knowledge that bridges this gap. The process of modeling can be considered as a process of enrichment or elaboration where the modeler starts with very simple and abstract models, and moving in an evolutionary fashion models with greater details depicting the complexity of the case being modeled [32]. The suggested canvas can play the role of an initial step in this process.

Note that for the modeling purposes BPC has competitors, e.g. business model canvas [8]. The distinctive feature of BPC in respect to modeling, however, is that BPC has no connection to a particular modeling technique. Thus, it could be used for any kind of modeling, be it workflow modeling, state-oriented modeling, goal-oriented modeling, etc.

When using BPC for modeling purposes, the direction of filling the canvas can be chosen as “from inside out”. This means that first one fills the components of the *inside* section, then goes to *resources*, and to the *outside* section.

The third area of possible BPC application is new **process design**. In this case, one uses the direction “from outside in”; filling the canvas starts with defining purpose, strategic goal, and other components of the outside section. After that, resources that are needed are identified and operational details of the process instances designed.

5.3 Directions for Future Research

The next stage of canvas development is testing it in practice, which will give feedback of what is needed for further development. The testing needs to be done for all three potential areas of application: decision-making, modeling and design. Though BPC is being designed primarily for the first and third areas of application, finding a case of these kinds might require more efforts than testing BPC for modeling. Therefore, testing BPC for modeling is planned as the first step in further development of the idea. To start with, the canvas will be introduced to the students studying Business Process and Case management [28] and completing their Master theses in this field.

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