Developing, implementing, and disseminating an adaptive clinical reasoning curriculum for healthcare students and educators

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D7.5 Sustainability model

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1. Summary

Based on the main results of our needs analysis and identified barriers for teaching clinical reasoning, we developed a Business Model Canvas to sustain the results of the DID-ACT project. Guided by our enterprise partners EDU and Instruct we worked in a small group on a Canvas template and discussed intermediate and the final results within our consortium. Our main value propositions will be our curricular resources, the integration guideline, but also the multiprofessional expertise within our team. Our main customers for those value propositions will be educators and faculty staff, such as curriculum developers or faculty development program directors, and of course students as the end-users. As we built the sustainability model on our needs analyses, we can explicitly target our customers and propose an added value for their teaching and learning.

2. Quality criteria

- Reviewed and agreed upon by all partners
- Basic costs calculation for all activities
- Defined future roles for all partners and associate partners

3. Introduction

In this deliverable we developed a business model to sustain the results of the project, especially the train-the-trainer course and the student curriculum and ensure the further development and implementation of these courses. To develop the model we used a Business Model Canvas as a tool. Such a canvas supports a joint development and discussion of a business model. This process included all partners and stakeholders identified in WP1 and addresses the barriers identified in the needs analysis (WP1).

4. Methods

The Business Model Canvas was introduced by Instruct at the beginning of this deliverable to all partners. Coordinated by EDU, we then formed a smaller group with seven members from different institutions. This group worked with the canvas template (Figure 1) (https://www.strategyzer.com/canvas) in a series of synchronous virtual meetings and asynchronous working phases starting with the value propositions. The proposed Business Model Canvas was then presented to the whole consortium during the face-to-face meeting in Kraków and all partners and associate partners provided feedback. Based on that feedback the small group refined the model and the final version was then agreed upon by all partners.

Figure 1: Business Model Canvas Template (https://www.strategyzer.com/canvas)

5. Results

Figure 2 shows the final Business Model Canvas we have agreed upon and which will be described in more detail in the following.

Value propositions:
Our value propositions were the starting point of our discussion and are based on the needs analyses we implemented prior and during the first phase of the project [Kononowicz 2020, Sudacka 2021]. The needs and barriers we have identified can be addressed with our main DID-ACT resources: (1) the student curriculum and (2) train-the-trainer course including all resources accessible on our learning management system and (3) the integration guideline available on our website. In addition, we see the expertise within our team, which allows us to support customers in applying DID-ACT resources, as a value proposition. Finally, we are a team of partners and associate partners offering a variety of networking and research opportunities to our customers and key partners.

Key partners:
The identified key partners correspond largely with the stakeholders we have identified for our project proposal and addressed throughout the project. Thus, key partners include our main target groups of educators, faculty staff, such as curriculum developers or deans, students, and researchers. However, we also see an institutional level as our partner, such as student associations, healthcare institutions, patient interest groups, or enterprises, such as publishing companies.

Key activities:
We have identified six key activities for our value propositions. Most of these activities are related to communication and dissemination, such as posting on Social Media, presenting at conferences, or maintenance of our project website. However, one crucial activity is also the update of the learning units and resources that are part of the DID-ACT curriculum.

Key resources:
Aligned with our key activities, key resources are our (1) learning management system hosting the (2) developed curriculum and TTT course including the educational approaches, (3) the DID-ACT website with the integration guideline and many other helpful resources (e.g., evaluation tools, certificate templates, collection of learning objectives, educational framework), (4) Open Educational Resources (OERs) we have developed, such as virtual patients and videos, and (5) the expertise of our multi-professional team.

Business Model Canvas

				Designed for:	Designed by:	Date:	Version:
				DID-ACT Project	DID-ACT Team	2022-11	3

Key Partners
- educators
- researchers
- head/deans of schools
- curriculum developers
- healthcare institutions
- publishing companies
- Patient interest groups
- Learner/student groups (e.g. EMSA)

Key Activities
- regular (quarterly) communication
- SocialMedia posts
- update/(extension) of the learning units
- maintenance of the website
- monitoring of usage statistics / evaluation
- events / conferences

Key Resources
- learning management system
- website hosting guidelines
- OERs
- our expertise
- developed curricular framework & content

Value Propositions

needs we saw in our needs analyses:
offers:
- integration guideline,
- curriculum itself for students and teachers
- resources

plus:
- our expertise
- networking and research opportunities

Customer Relationships
- support
- yearly workshops on CR and community workshops to revise/update LUs
- invite guest experts on CR
- collect user feedback

Channels
- conferences local & national meetings
- journal publications
- healthcare (educ.) associations
- Social media (newsletters)
- Search engine optimization (SEO)

Customer Segments
- educators / curriculum developers: depending on institution and level quite heterogeneous
- students, curious about how CR is taught in their institution and looking for ideas
- professionals and graduate students looking for certification in the teaching of clinical reasoning or more credibility in CR knowledge
- course providers /educational institutions

Cost Structure
- constant content review & update
- support of users / partners / interested customers
- minor costs (website domain, hosting, technical update, Moodle hosting & version update)
- regular DID-ACT team meetings
- journal publication costs (APC), registration fees for conferences
- cost of organizing workshops

Revenue Streams
- subscription or support fee for "extended use" additional support
- Additional services
- financial (or protected time) support from our own institutions?
- consulting / audit of curricula implementation
- invited speeches
- voluntary donations / fundraising
- creation of requested LUs/material about CR topics for other institutions/publishers for price/exchange of services
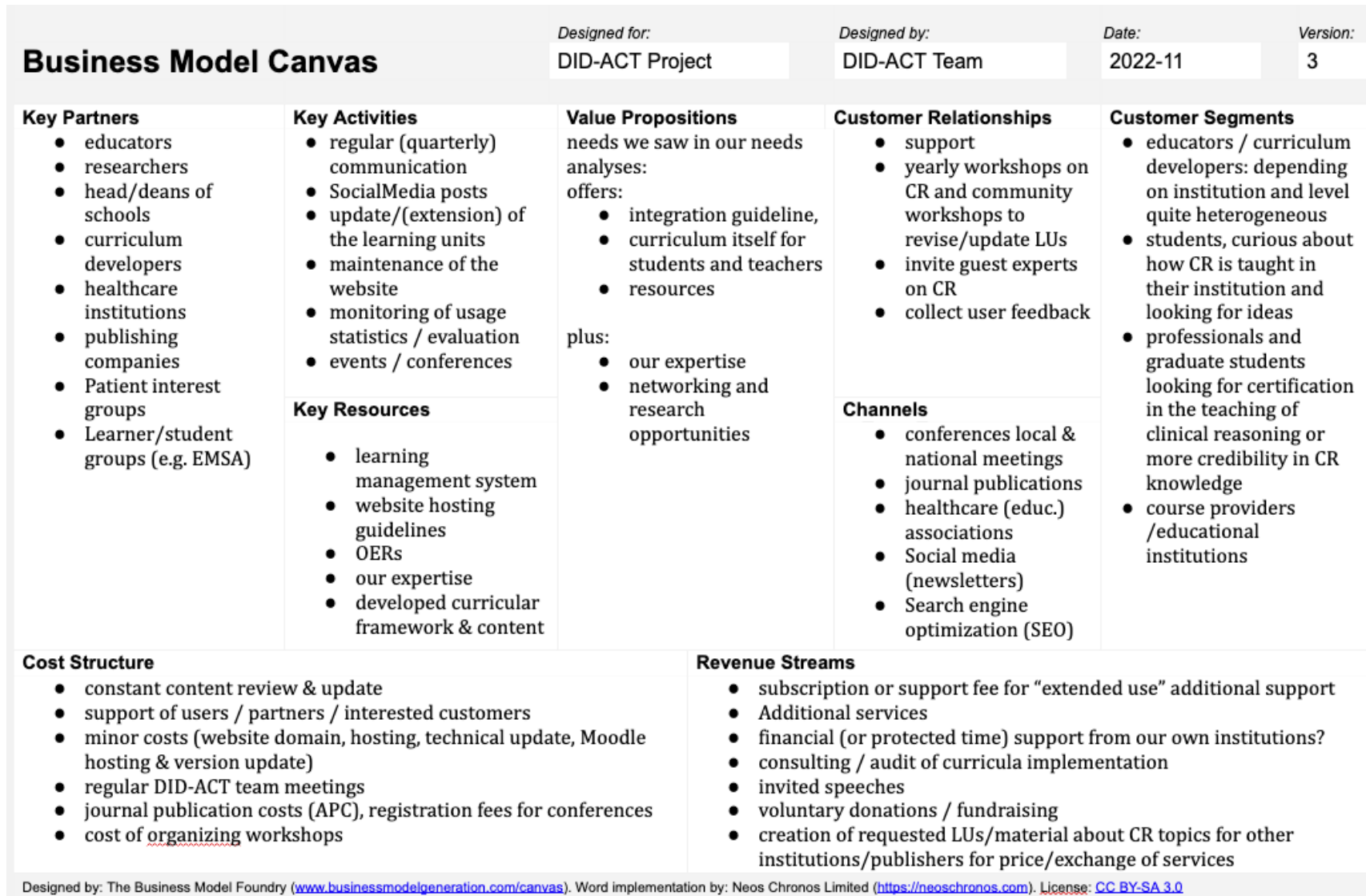
Figure 2: Completed Business Canvas Model for the DID-ACT project

Customer segments:
Our key customers are partly also key partners, especially educators, faculty staff, and students. Additionally, important customers are healthcare professionals who want to receive accredited training in clinical reasoning and course provider enterprises, who can integrate our courses and resources into their portfolio.

Customer relationships:
A main aspect of our customer relationships will be the continuous support and coaching of customers in applying and integrating DID-ACT resources. This includes technical and didactical aspects. Offering workshops for customers will be one part of support and we envision inviting external experts in clinical reasoning to co-host such workshops about different topics on clinical reasoning teaching and assessment.
Another major pillar of our customer relationship will be the continued collection of feedback through evaluation linked in our learning units, through comments on the website or on social media, but also feedback we receive during workshops and our conference presences.

Channels:
The channels we will use to stay in contact with our key customers are aligned with channels our customers are active on, but also with the channels we are active as part of our daily business. This includes presentations and workshops at local, national, and international conferences and meetings, scientific journal publications, or promotion in healthcare (education) associations, such as AMEE or GMA. Additionally, we will continue to disseminate updates and news through the community of customers we have gained during the project on Social Media, especially, LinkedIn as the channel with the most followers. As during the project, we will continue to optimize the findability of the DID-ACT website and social media channels through search engines such as Google search.

Cost structures:
For providing continued access to our content, some minor costs (time and money) are involved, including the website domain and the hosting and technical update of the website and the learning management platform. The support of our (future) customers requires a time commitment of partners to answer questions, provide technical support, or organize meetings. Content-related costs are involved to provide a constant content review and update of the DID-ACT learning units. Finally, we will need to cover costs for journal publication costs (APC), registration fees for conferences, and costs of organizing workshops and meetings.

Revenue Streams:
To cover the aforementioned costs, we are planning the following revenue streams: although the use of learning units and all resources is free of any charges, Instruct will offer an extended subscription model offering additional and individual support, data export, and coaching. This can also include the creation and adaptation of new material in cooperation with the academic partners. Another pillar of revenue will be support from our own institutions in the form of protected time, budget for covering new or updated learning units,

conference attendance, organizing meetings, and publication costs. Team members already have been invited to present about the project and received a small reimbursement. We expect this to continue after the project has ended and plan to set up a fund for such incomes. Also, voluntary donations and fundraising incomes will be deposited in this fund.

6. Conclusions

Our business canvas, especially the value proposition and the customer segments, strongly builds on the needs analyses we have conducted prior and at the beginning of the project. These analyses considered the stakeholders we have also targeted in this business canvas as customers and key partners, such as educators and students. We also tried to align the proposed key activities and channels with activities our academic and business team members are anyway involved in to maximize sustainability. During our meetings in the last months of the project period we discussed the next steps related to our business model. We have already submitted abstracts to the AMEE conference in 2023 and developed a plan for social media posts in the first half of 2023. Also, we secured funds to organize a face-to-face team meeting in 2023 to discuss our progress in sustaining the project results.

Together with the integration plan published on the website the DID-ACT consortium already moved the Website www.did-act.eu from a project website to a more product / outcome centered portal. This work will be continued and services will be offered there.

7. References

- Kononowicz AA et al. The need for longitudinal clinical reasoning teaching and assessment: Results of an international survey. Med Teach. 2020;42(4):457-62. (Link)
- Strategyzer AG - Canvas. Available from https://www.strategyzer.com/canvas.
- Sudacka M et al. Why is it so difficult to implement a longitudinal clinical reasoning curriculum? A multicenter interview study on the barriers perceived by European health professions educators. BMC Med Educ. 2021;21(1):575. (Link)