

DESIGN METHODS AND PROCESSES

Design Methods within a design project:
New net of entertainment in Cagliari city

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Abstract

The paper is focused on a project design for the valorization of Cagliari city, in Sardinia, with the creation of a new net of entertainment. The project had been developed investigating the central set of problems of the city and then generating an idea as a solution to many issue together and easily applicable also in other part of the island. The analysis will be focused on the development of the main idea itself, and the most arduous tasks of it will be analyzed with design method's tools. A short review of theoretical concept will be necessary to introduce the design methods tools utilized: the definition of a statement and target, study of stakeholders need's and requirement and finally the divergent-convergent phase with partial-solutions analysis. In the last part of the paper will be underlined the advantages and applicability of tools in that project.

Introduction

The project idea come up, focusing on the most important problems of Cagliari city: the lack of a systematic net of services to attract tourists, the problem of young escape, the increasing family-business number which fight to stay alive because the lack of proper advertisement^[1]. The core of the project is the generation of a new way of city's entertainment. The project consists on the organization of a limited number of theme events and the creation of handmade gadget and proper "game materials" for each event. Pub owners can choose from an online catalogue, the event that they want to hold in their local, and after some days they will receive a package with all the party materials. The aim of the project is the creation of a net of events around the city, every time in a different local. To work well, the project have to invest a lot on advertisement, and come out in the city as a cool and funny new way of entertainment. From the owner pub point of view, there are not drawbacks: the service, indeed, provides them free advertisement and all the necessary to do a successful well thought event. Cagliari is the first city in which the project is applicable, and then the "event-net" can be enlarged to other Sardinian cities, advertising the most characteristic and picturesque local activities (bar, pub, restaurant, cantina).

As the profile of idea was drawn, lots of problems start to come out: which type of event can be really successful? Which kind of materials to provide? How to cheap advertise? How to convince pub owner's to join? The project seems to be too complex to be realized, first of all, for the difficulty of focus on the main idea also skipping some aspect that could be redundant; secondly for the lack of a rigorous method to analyze and solve all problems.

Overview: Design methods

In the past, many authors had developed methods and models to explain how to systematically approach a design project, contributing to the definition of the design methodology: the academic subject which give indications on how to do design. Comparing the various design process models, there is a general agreement of design authors on the major design phases: 'analysis of task', 'conceptual design', 'embodiment design' and 'detailed design' ^[2]. In particular, the paper will focus on some of the most critical task of the project which will be analyzed with the following methodological scheme:

- *Task clarification*: collect information about the requirements that have to be fulfilled by the product. Develop a statement clarifying the intent and idea, analyze stakeholders and target.

- *Problem framing and idea generation*: expand the thinking (divergence) to explore all of the issues related to the design idea. Creation of a network of problems and individuation of partial solutions and relative constraint.
- *Concept formulation and assessment*: once all of the ideas related to the design idea are surfaced and reviewed, then focus (convergence) on a single satisfying solution.^[3]

Specific design tools will be used: TRIZ methods (theory of the resolution of invention-related tasks) to solve contradictions and morphological charts, to find the overall solution which better satisfy the requirements.

Results

Clarifying the ideas, as first step of design method's tools, the statement of project is: "Creation of a platform who put in communication: young costumers (18 ~25 years old) and itinerant theme events organized, ad hoc, in local family run pub and bars. The aim is the revaluation of family run pub and bars; and the creation of a new amusing way of entertainment for young night life."

The main stakeholders linked to the project are: final costumers, who want funny and successful events, the possibility to share on social network and to know new people; pub owner who want visibility, free advertisement and more costumers; public organization who want city's revaluation, way to avoid "young escape" and increase of city's services also to attract tourists; the investors: who want a profitable service, extended to the higher number of costumers and the possibility to propose the same model in other cities in order to enlarge the business and , finally, the service provider company and the delivery company partner (which will deliver the package to owner pub). Some of stakeholders share the same needs, who can be related to human life activities and mental status, to the engineering of the solution proposed, to the financial aspects or to law and the standards which has to be respected.

Analysis of Stakeholders: need and requirements

- **Human based:** Intuitive and simple platform. Enjoyable, attractive and cheap theme events. Easy understandable game rules.
Stakeholders: Costumers, pubs owner, service provider company
Requirements: time to understand the event catalogue on the platform, time to understand game rule, statistic of number of people who would participate at events. Cost of participation of event for costumers < 5€ .
- **Technical/Functional:** Delivery of theme material on time. Party material easy to manage, not too effort for pub's owner to organize and set up, not too much material to provide for each event.
Stakeholders: Pubs owner, service provider company, delivery company
Requirements: time to delivery, time to prepare the room, level of reusability of theme gadget and materials, level of possibility to clean and reuse them more time.
- **Business/corporate:** Profitable service, extended to the most high number of costumers. Possibility of business enlargement of the future.
Stakeholders: Service provider company, pub owner, investors, public organizations
Requirements: total cost of events organization + cost of delivery < incomes, number of events= number of main interest of the heterogeneous target, level of applicability in other city.
- **Regulatory/ policy:** Environmental standards for materials
Stakeholders: Service provider company, public organizations
Requirements: level of recyclability of materials.

Starting the divergent phase: the paper will focus on the events' organization task, overlooking the platform and communication aspects. There have been individuated two main problem: how to attract the whole target of young people (PB1) and problems linked to the organization of event (PB2).

Network of problems

Focusing on the target of young people on the age between 18~ 25, the first problems comes out because of the heterogeneity of preferences, interests and budget owned. The project is thought to attract the whole category, for this reason from the network of PB1 come up a contradiction (fig.1). To do not lose the part of costumers with limited budget the only possible partial solution is doing free events, but at this point another sub-problem appears: how to compensate the lack of costumers' incomes?

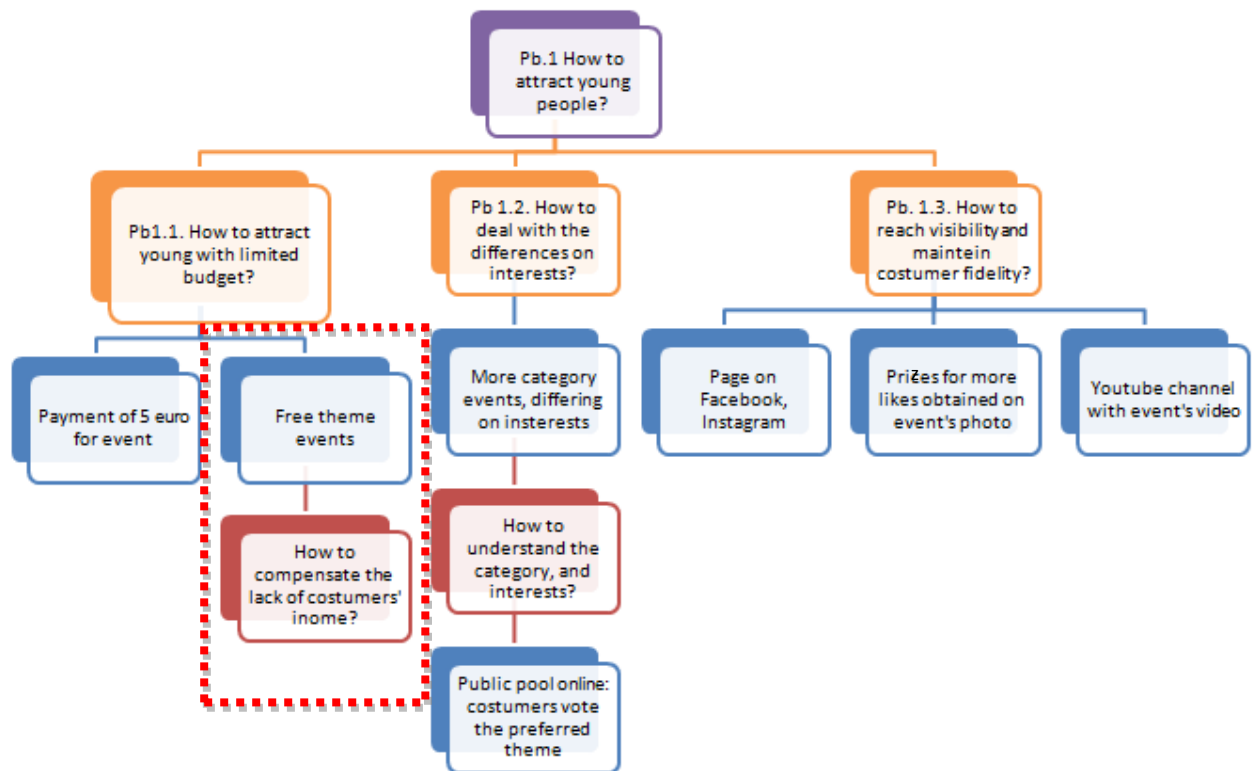


Figure 1. Network of problem 1

One of the business requirements is the equation: cost of event organization + delivery materials < income. If costumers not pay at all, all the expenses can only be saturated by pub's owner contribute and, in little

part, by online advertisement. As the aim of the project is to help the revaluation of family run pubs , their quota must be limited.

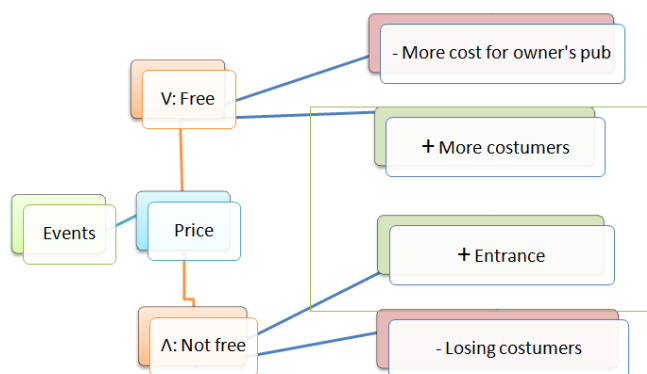


Figure 2. Application of TRIZ model of contradiction

That contradiction is solved with the tools of separation in space (fig.2). Considering the event as element, the price as feature, we have the two alternatives of free or not free events, which lead respectively to two results one positive, the other negative. Using the TRIZ tool of separation in space of the

problem: there is not the necessity that events price has to assume the value "Free" all the time^[4]. There can be created basic events for free and more complex events for paying.

Looking at the overall network, as partial solutions come out the necessity to program different type of event from the economic point of view, basic event for free and more structured events for paying, and from contents, different events in base of different interests. The individuation of interests and theme event category will be based on online polls.

The second network of problems (Fig.3) can be draft analyzing the theme event organization. Due to the fact that the events are limited and that the owner's pub choose which event they want to hold in their local; the pack of events' material must come back every time. The materials must be waterproof and reusable. Some good partial solutions come by the divergent phases as: make costumers pay 1€ for gadget and if they give it back they receive their money back.

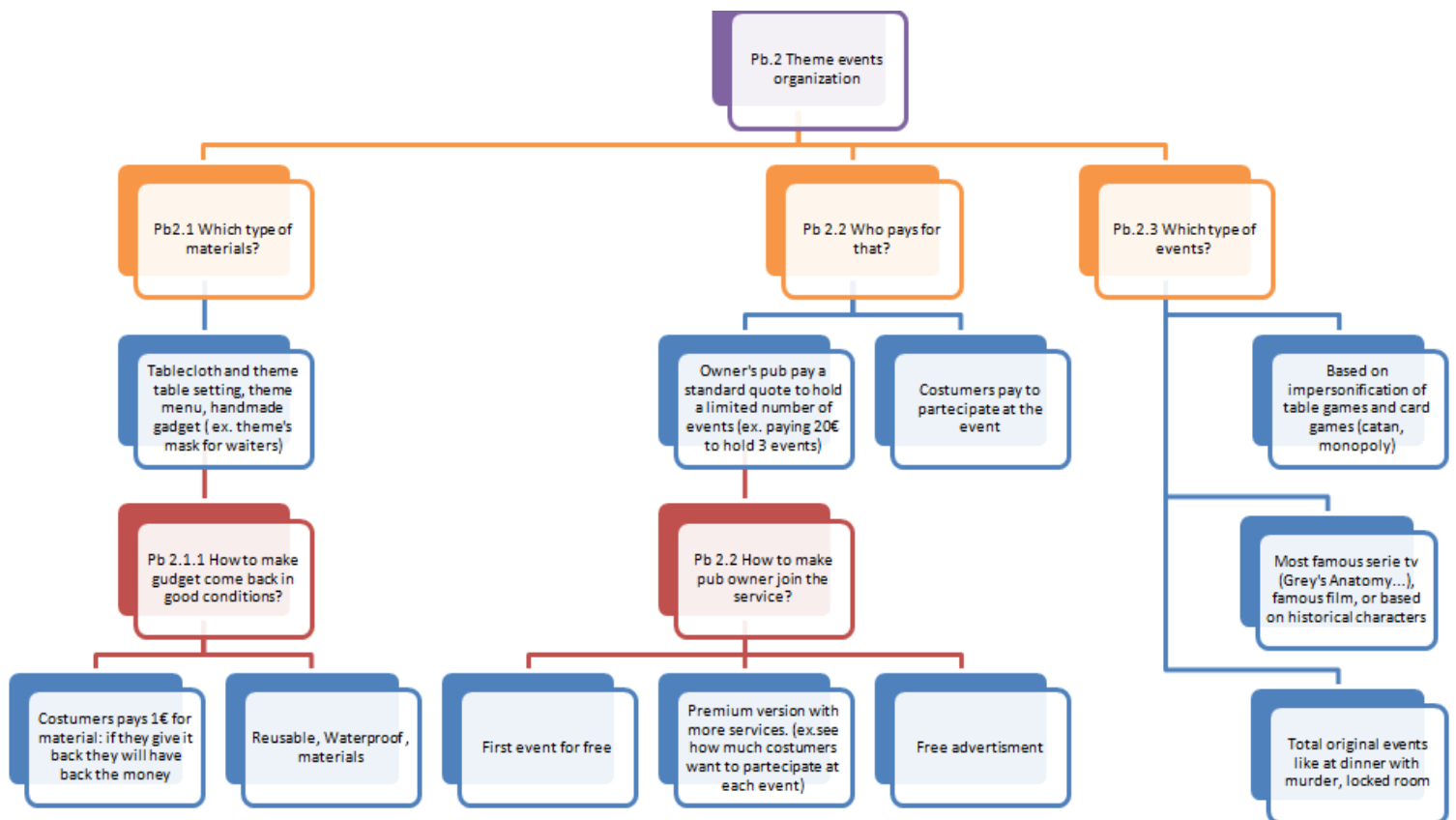


Figure 3. Network of problem 2

The other issue regards the owner pub quota to participate at the project. As partial solution has been found that owner's pub pay a standard quote to hold a limited number of events in his local. To convince them to join the project, the first event will be provided for free, there will be the possibility to look at the statistic in advance (estimated participants for each events) and free advertisement. The events will be based on the most famous series tv and film, on historical characters, and on role-playing games based on famous table and card games. Moreover, will be organized totally originally event as: dinner with murder and locked room.

Having gone in details on all possible issue of the two topic selected, the last step is the convergent phase in a unique solution. In that phase, the overall solutions are selected as combination of partial solutions,

creating morphological charts. The overall solutions founded are scored from 0 to 4, considering how much the requirements are fulfilled^[5]. In that case, the solutions founded were very similar because of partial solutions were, most of the time, complementary and the main contradiction has been already solved with TRIZ methods. Considering the requirements of profitability, the simplicity of role games and the little time to pubs owner to set the local, the overall solution with the most high score is the one who consider the providing of simple but high quality gadgets as, for instance: tablecloth, theme table setting mask for waiters; a standard quota for pub owners to join the project and the organization of event both free and for payment.

Conclusions

At first, the same project idea was confusing because of the complexity of so many different issue included. The definition of a statement has been necessary to understand the proper target, to focus on the main problem and to organize ideas. In that way, with a proper organization of concepts, it was also possible to understand the concepts to live out: redundant concepts that would have made the project too complex to be actuated.

The second really applicable and useful design tool, is the development of problems network. The strength of this methods is the possibility of splitting the difficulties, subdividing the main big problems in sub-problems and work on them separately finding partial solutions. In that way, the definition of the proper overall solution becomes a process of selection between all the partial solutions, obviously taking care of possible conflicts between them. Another relevant aspect, is that the work of thinking at all the possible issue make lots of insidious problems emerge which were totally unknown in the starting phase. The TRIZ methods, to solve the conflict between partial solution, has been a very enlighten way of approaching. The methodology of looking at the problem by a totally new prospective, separating in time and space, it make think at really original solutions that were not contemplate at the start but that reveal to be essential to realize project.

Focusing on the specific tasks analyzed, the tool of morphological chart results to be a bit confusing as the most of partial solutions were complementary and the most suitable overall solution come up clearly also without a rigorous methodology. On the other hand, it should be remarked that making a more detailed analysis of the whole project, comprehensive of all possible tasks and network of problems, the morphological chart surely will be as necessary as the other methods.

In conclusion, about the applicability of the tools, the project can be perfectly studied with design methods. Without following that thought methodology, it would be surely possible to arrive at a general solution. However, the result would be an incomplete estimation and very difficult to be realized in practice, with lots of contradictions and problems unsolved. Applying that design tools, every drawback and potentiality of project were clearly underlined, and most of all, the result of analysis is a practically realizable work.

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