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DIGITAL PLATFORM FOR STARTUP'S

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Abstract: Digital platforms can connect people, organizations, and resources to facilitate the core interactions between businesses and consumers To facilitate the essential interactions between businesses and consumers and ensure increased efficiency for company management, digital platforms can connect people, organizations, and resources. As a result, the foundation of new company concepts, like creative start-ups, is built on creativity, scalability, and connections with the surrounding community. The objective is to identify important organizations that support startups in their establishment and growth, pinpoint regions in which startups receive assistance from the social networks of their key members and/or founders, and examine the correlation between the kinds of contacts and support offered.

These networks comprise friends and business partners in terms of their use rates, important roles, and level of support, as well as business angels in terms of finance and advice on technology and marketing. Certain weak ties have different uses (both positively and adversely) than they have importance. Although business incubators assisted 50% of businesses, the incubators' assistance in creating networks and connections with the outside world appears to be underappreciated. Our findings suggest that networking initiatives with outside parties should be part of startup support programs

Index Terms **-** Digital platforms, Startups, Community connections, Business partners, Startup support programs.

I. INTRODUCTION

Digital platforms have emerged as powerful tools in the dynamic landscape of entrepreneurship, fundamentally altering how startups strategize, execute, and scale their operations. From e-commerce marketplaces to collaborative workspaces and on-demand service platforms, these digital ecosystems have democratized access to markets, resources, and expertise, ushering in a new era of innovation and prosperity for entrepreneurs.

These platforms have significantly reshaped the startup landscape, offering unprecedented opportunities for agile and ambitious businesses to disrupt established markets and create novel value propositions. Serving as online market hubs, they connect customers with goods, services, and experiences in previously unimaginable ways. Moreover, they provide startups with access to global audiences, scalable infrastructure, and data-driven insights, enabling rapid experimentation, iteration, and growth.

This study deals with the processes by which startups engage with existing components within their business networks to foster innovation and establish themselves within the ecosystem. Specifically, it focuses on technology-based startups originating from universities, where ideas stem from collaborations between researchers and companies. Commercializing these ideas necessitates an early understanding of user preferences and willingness to pay. Developing customer relationships and iteratively learning from interactions are recognized as vital aspects of establishing a foothold in the market.

The innovation process is depicted as interactive and nonlinear, involving diverse connections between firms and individuals. Von Hippel (1988) highlights that innovation often originates not only from within the company or researchers but also from users or suppliers. Additionally, Pekkarinen and Harmaakorpi (2006) emphasize the importance of collaboration with universities, technology centers, and development

organizations in idea generation. This collaboration is particularly crucial for technology-based startups, which often face resource constraints.

Previous research has predominantly focused on the entrepreneur's relationships, such as familial and professional ties, as foundational elements in shaping the startup's initial network. Elfring and Hulsink (2007) distinguish between various types of relationships in startup network development, highlighting the significance of the entrepreneur's existing connections during the emergent phase of the firm.

II. LITERATURE REVIEW

In our research of making this Platform, we had two basic research directions – one focused on the relational aspects, and the other on the structural characteristics The first path is mainly concerned with investigating the function of strong and weak relationships in commercial dealings and the influence of relationship power on the quality of those dealings. Most of these researches are based on the concept of Granovetter (1973), who was the first to draw attention to the importance of weak ties. The second research direction is the structural approach emphasizing the position in the network and the size of the network. Examining the business networks reveals three distinct layers. The first layer focuses on the creation of business networks, i.e. the tasks an entrepreneur completes to create, preserve, and grow their network. The second layer focuses on the structure of the business network at a specific time and measures the result of previous activities. The economic benefits of the information and services obtained from the partners are measured at the third layer, which is supposedly the closest to the company's performance. in the networks during a certain time. The contents, structure, and dynamics belong to the often-explored characteristics of business networks, including the network of technological companies. Knowledge entrepreneurs are more focused on networking than traditional entrepreneurs. The most crucial resources that the social network obtains are as follows: (1) information; (2) financial resources; (3) knowledge and skill access; and (4) social legitimacy. It is divided into four types of resources: personal contacts, knowledge and experience, physical resources, and financial resources. An important benefit of social capital is the access to other networks and contacts and the identification of new opportunities. Businesses are more competitive when they have connections with external partners and social media platforms. Some benefits of social networks include information, acquaintance, physical goods, financial aid, business training, personal help, moral support, legal and accounting services, creative ideas, and work. The networks allow entrepreneurs to access resources at lower than market prices and to access resources that would not otherwise be available on the market. The less the resources are available on the market, the more entrepreneurs must rely on networks and contacts.

III. METHODOLOGY

Since its beginning, a basic technique in business network research has been the questionnaire survey. Our research's target group was chosen to be startup founders. The startup entrepreneurs who were chosen for the study had to fulfill the following requirements:

- To be a startup (co-)founder the startup has to have at least one paying customer,
- The company must be considered a startup,
- The age of the company is limited to 7 years.

There were A few responders were chosen in collaboration with particular startup ecosystem participants. These actors sought to collaborate with startups directly or gave the study team the contact information of the chosen firms after confirming that the chosen respondent met the predetermined criteria. In one instance, the actor in question gave the collaborating startups a printed questionnaire; in another, an actor representative approached the respondents and requested that they complete the questionnaire online.

Social Network Organization Fifteen distinct categories of contacts were shown to be crucial for starting and growing a business based on the research. There were strong and weak bonds, personal relationships, and business and professional relationships. When asked if they had used members of that social circle either before or after they had their first paying client, the responders had to answer. For each of the fifteen social groupings that were provided, the responses were provided. In addition, the participants were requested to select the fifteen social groups from the list that they believed were essential for the formation and growth of a business. They may have marked as many groupings as they wanted. Social Network Contribution: Eleven activities that make use of social networks are identified based on research.

IV. SYSTEM DESIGN

Agile Development:

Scrum: Scrum is a popular agile framework that emphasizes teamwork, accountability, and iterative progress. In Scrum, a cross-functional team works in short, time-boxed iterations called sprints, typically lasting 2-4 weeks. During each sprint, the team plans, executes, and reviews their work, allowing for frequent testing and adaptation. The Product Owner, Scrum Master, and Development Team are important positions in Scrum.

Waterfall:

A common method for managing projects in software development is the waterfall model. It divides a project into several stages, resembling a waterfall cascading down a precipice. Before going on to the following phase, each one needs to be finished. Here's a summary:

Phases:

The requirements gathering, design, development, testing, and deployment phases of a waterfall process are all well-defined.

Linear Flow: The output from one phase feeds into the next as the phases go one after the other.

Strengths: Good for projects with steady requirements, straightforward and easy to understand.

Weaknesses: Risky for projects with ambiguous needs; rigid; hard to adjust to changes.

MINIMUM VIABLE PRODUCT (MVP):

An MVP is the most basic version of a product that contains only the essential features needed to solve the target audience's core problem or fulfill their primary need. By releasing an MVP early, startups can gather valuable user feedback to validate assumptions, identify pain points, and prioritize feature development.

The key to creating a successful MVP is understanding the minimum set of features that provide maximum value to users. This requires close collaboration between product managers, designers, developers, and other stakeholders to define and refine the MVP scope.

User-Centered Design (UI/UX):

User-centered design (UCD) is an approach that prioritizes the needs, preferences, and behaviors of users throughout the design and development process. It involves understanding user goals, conducting research (such as user interviews and usability testing), and iteratively refining the product based on user feedback.

UI design focuses on the visual presentation and interaction design of the product, ensuring it is aesthetically pleasing, intuitive to use, and consistent with user expectations. UX design encompasses the entire user journey, from initial discovery to post-interaction satisfaction, aiming to create a seamless and enjoyable experience for users.

Implementing UCD involves techniques such as persona development, user flow mapping, wireframing, prototyping, and usability testing. By incorporating UCD principles, startups can create a user-friendly platform that resonates with their target market and fosters engagement and loyalty.

V. ARCHITECTURE

Client:

React.js has been utilized in our client-side solution to dynamically render content received from the server, improving user experience using smooth DOM manipulation. Through the use of React's component-based architecture, we have effectively converted server replies into browser-based interactive elements.

Server Side:

To design and administer our server environment, we use Node.js and Express.js in our server-side architecture. We build a scalable and effective backend system that can easily handle incoming requests and serve responses by leveraging the powerful features of Node.js.Express.js simplifies the process of developing web applications by offering a lightweight framework with robust middleware integration, routing, and HTTP request handling capabilities. This makes it possible for us to plan efficient communication between our application's front-end and back-end.

Database:

"Our primary choice for data storage in our database design is MongoDB Atlas.
We can effortlessly integrate MongoDB Atlas' cloud-based, fully managed database solution with our front-end and back-end technologies.
We guarantee reliable and scalable data storage capabilities for our application by utilizing MongoDB Atlas. This enables seamless operation across a variety of features by allowing us to effectively store, retrieve, and alter data in response to user inputs.
Moreover, MongoDB Atlas makes it easier to integrate with frontend and backend components, which makes it easier for us to manage data storage tasks like updates and deletions. This guarantees that our application will continue to provide users with the best possible performance while preserving data consistency and integrity.

The methodology section outline the plan and method that how the study is conducted. This includes Universe of the study, sample of the study,Data and Sources of Data, study's variables and analytical framework. The detailsare as follows;

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