White Paper on Industry Sessions
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Authors: Solomon Darwin, Henry Chesbrough, Mallik Tatipamula, Dieudonnee Cobben

Research and analysis presented in this paper is based on discussions between and among the following practitioners and academics on related topics:

Topic: The Invincible Company: How to Constantly Reinvent your Organization

<u>Presenter</u>: Dr. Alexander Osterwalder, Co-founder Strategyzer

Topic: The Value of Open Innovation across Industries

<u>Presenters</u>:
Dr. Mallik Tatipamula, CTO, Ericsson, Chairman, Industry Advisory Board, Garwood Center
Dr. Prith Banerjee, CTO, Ansys
Dr. Piyush Modi, Chief Strategist, Global Business Development, Industrial Sector, Nvidia
Mr. Peter Coffee, Head of Open Innovation Research, Salesforce
Mr. Hans-Georg von Lewinski, Senior Partner, Korn Ferry
Session Moderator: Prof. Solomon Darwin

Topic: Open Science and the Dark Kinase: Inside-out Innovation in Big Pharma

<u>Presenter</u>: Dr. Maryann Feldman, Professor, University of North Carolina at Chapel Hill

Topic: Leveraging Open Innovation for Doing Social Good

<u>Presenters</u>
Ms. Preetha Reddy, Vice-Chair, Apollo Hospitals Group
Mr. R. Mukundan, CEO, Tata Chemicals
Ms. Lila Tretikov, CTO, Microsoft
Mr. Keith Strier, VP, Worldwide AI Nations Initiatives, Nvidia
Mr. Charlie Isaacs, CTO, Customer Connections, Salesforce
Session Moderator: Prof. Solomon Darwin

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Executive Summary – The power of collaboration across industries

This report is the result of an in-depth study of the presentations, discussion sessions, breakout sessions, questions and remarks made at the World Open Innovation Conference 2020. The conference has shown us that Open Innovation allows organizations to explore multiple growth options in parallel. Recovery is forward and not backward; Digital transformation that has resulted in new ways of working. The collected notes were summarized and put into a white paper to benefit the attendees of the WOIC 2020 and their companies and governmental and academic organizations. These recommendations do not represent full solutions, but rather suggestions and visions contributing to the challenge of turning threats into opportunities with Open Innovation.

This report includes keynote presentations by the following two organizations:
1. Alex Osterwalder from Strategyzer: The Invincible Company: How to Constantly Reinvent your Organization
2. Maryann Feldman from the University of North Carolina at Chapel Hill: Open Science & the Dark Kinase: Inside-out Innovation in Big Pharma

In addition, the reports also contains the main takeaways from two discussion sessions:
1. Industry Session: The Value of Open Innovation across Industries
2. CEO Industry Session: Leveraging Open Innovation for Doing Social Good

The following chapters report a detailed description of the discussions conducted during each session. Moreover, we provide a short presentation of more general recommendations that resulted from a cross-analysis of all the presentations and discussion sessions at WOIC 2020, that go beyond the individual presentations and sessions, and can be considered by industry at large, and concern:

1. The strength of ecosystems
2. Creating a culture for change
3. Measurement of ecosystem health
4. The importance of creating new business models

Keynote 1: ''The Invincible Company: How to Constantly Reinvent your Organization''

Speaker: Alexander Osterwalder, Co-founder Strategyzer

Dr. Alexander Osterwalder is one of the world's most influential innovation experts, a leading author, entrepreneur and in-demand speaker whose work has changed the way established companies do business and how new ventures get started. Ranked number 4 of the top 50 management thinkers worldwide, Osterwalder is known for simplifying the strategy development process and turning complex concepts into digestible visual models. Together with Yves Pigneur, he invented the Business Model Canvas, Value Proposition Canvas, and Business Portfolio Map – practical tools that are trusted by millions of business practitioners from leading global companies. In his presentation, Alex shows how invincible companies move beyond their industry boundaries, and how they combine two organizational cultures.

Main takeaway 1: Move beyond your industry boundaries

Opportunities are created on the edge of the system, rather than within center of the traditional industries. Companies such as Tesla are moving beyond their own industry boundary, and are exploring their opportunities in other industries. In the case of Tesla for example, they first disrupted the car industry with their ''sexy'' electric vehicles, and are now transcending their industry boundaries towards our homes by designing power walls and solar ecosystems at homes. These kind of standout companies seem to do a number of things differently from other companies:

1. They constantly reinvent themselves
2. They compete on superior business models
3. They transcend industry boundaries and create completely new arenas

Main takeaway 2: Cultivate explore and exploit under one roof

Exploration and exploitation require completely different organizational cultures. Exploitation focuses at managing the existing, while exploration focuses at creating something new. In the case of exploitation, many industry players know a lot about their products and services, and the risk is rather low. Exploitation risk centers on the risk to die or to be disrupted. Exploration, on the other hand, encompasses high uncertainty, because it requires new business models and value propositions. It requires different ways of working. Exploration can be very risky, because of its difficulties of predicting the expected return and innovation risk. It can be a challenge to combine these two different cultures within one organization. Whereas exploitation is often based on innovations that are based on efficiency (old business model is dying, new BM helping you to more efficiently die), exploration is often based on transformative innovation (new business models and value propositions). Leaders should spend enough time on innovation, to understand the portfolio of innovation projects within their organization and to understand the preconditions for growth. Failures need to be accepted to create a success. By combining exploration and exploitation, organizations should create a funnel of innovation projects, because it is too risky to pick a winner without investing in the losers.

Industry Panel Session #1: The Value of Open Innovation across Industries

Panel Keynotes: _Dr. Mallik Tatipamula, CTO, Ericsson; Dr. Prith Banerjee, CTO, Ansys; Dr. Piyush Modi, Chief Strategist, Global Business Development, Nvidia; Mr. Peter Coffee, Head of Open Innovation Research, Salesforce; Mr. Hans-Georg von Lewinski, Senior Partner, Korn Ferry_

In times after a pandemic such as the Covid-19 pandemic, the world needs to open up. Many companies are looking for ways to elaborate Open Innovation to increase the profit margins. A need exists by these firms to find ways to collaborate with developing partners, to scale and sustain business and improve margins. The new normal requires Open Innovation at work. Many challenges remain in creating value for all shareholders and stakeholders across the industries. In this session, a panel discussed how they understand the current challenges within companies, how processes and methodologies from use cases can be implemented and what the role of Open Innovation is in digital transformation within and across industries.

Main takeaway 1 (Ericsson): Complex technologies such as 5G require an industrial value chain approach
Currently, several new technologies are being developed that could change our world drastically. One of these technologies is 5G. These types of complex technologies require collaboration across industries to be able to implement them properly. Within the industry boundaries, the adoption of 5G is incremental, whereas the adoption across industries is exponential. The implementation of 5G requires an ecosystem including six types of partners:

1. Standards and open Source: Government and policy makers
2. Component Vendors: Phone manufacturers
3. Infrastructure networking: IT/Data Center
4. Communication Services: Cloud Service Providers
5. Consumer Applications: Enterprise applications
6. Industrial IoT players: public private partnerships

The variety of the partners in this list provides an overview of the diversity of partners that organizations needed to be included in the participation process, when considering the implementation of new technological innovations.

Main takeaway 2 (Korn Ferry): The companies of the future need to understand the characteristics and nature of the leader of the future to exploit the opportunities of talent

Distinct leadership capabilities are necessary to drive change and innovation in a complex, volatile business landscape. Influenced by global megatrends such as the political climate leading to regulatory and market uncertainty, a change can be seen from control towards trust, speed, empowering and growth. Companies can only be disruptive when leaders can continuously disrupt themselves and proactively drive change to navigate the uncertain business environment. Self-disruptive leaders have five important capabilities: they can anticipate, drive, accelerate, partner and trust. Some of these matters can be different for specific markets. Development must be matched or customized to the change needed to achieve measurable results, and therefore leaders need to understand that:

a. Change starts with insight: start by asking what the change is that you are looking to see in your leaders and why
b. Development happens through experiences that occur over time: Real changes happens on developmental journeys changing leaders' thinking and operation
c. Context is critical: development must be relevant for the organization to be meaningful
d. Develop leaders at every level for organization wide change
e. Measure impact of development

Leaders have to understand that a company has to be with one foot in the present, and one foot in the future. Only then, the company has a chance to survive tomorrow. Joint objectives should be based on trust.

Main takeaway 3 (Salesforce): The three elements of Salesforce's open innovation success

Open Innovation has stimulated Salesforce's journey towards addressing obstacles to adoption, acquiring customers, prolonging revenue cycles, and seeking ways to monetize mere invention. Salesforce has included three elements of open innovation at salesforce:

a. Observe incongruity: why do people put up with this?
b. Recognize new knowledge: can people now have something better than this?
c. Achieve change of perception: will people accept no longer doing this?

Each company has to be constantly aware whether it is stagnating or still causing change. To survive in the future, every organization needs to be able to grow and disrupt in the future. Stagnating is not going to result in future survival in the long run. The measurement of stagnation can support organizations, to understand when they stagnate and be able to undertake action.

Main takeaway 4 (Nvidia): Design a cross-industry AI platform

It is important to consider whether your platform can also offer solutions for other organizations. The Nvidia AI platform offers data analytics and training, inference and application frameworks. It is an open and optimized framework. AI is relevant for all industries, and there are many possible applications such as in supply chain, manufacture and service. An AI platform for industrial use cases could unlock 4.8$ trillion added economic value. Also for the Covid-19 pandemic, all kind of solutions were developed. For example, the Covid-19 virus was visualized by using the Clara application from the AI platform, resulting in a massive breakthrough. These kind of platforms can contribute to the democratization of AI, for example via an AI contest, training and a GPU cloud. Computers enable people to do a life full of work, by just using a computer. They can make the computer smart for them.

Main takeaway 5 (Ansys): Understand the importance of horizon 3 innovations

It is important to always keep on developing and see how to continue your business in the future. To do so, it is important to understand the importance of the three horizons of innovation. It is a struggle to develop the horizon 3 innovations, to disrupt the market. Funding of R&D is done by three groups: federal government, venture capitalists and CEOs and Boards of companies. The federal focuses mostly on basic research, the VCs on funding to startup companies and the CEOs and Boards of companies on funding to their own companies to fund growth. R&D is performance by academics, researchers at national labs, entrepreneurs in start-ups and R&D engineers in larger established companies. Open Innovation enables collaboration between all those groups. Large companies can support disruptive innovation by:

1. Looking at and learning from failure cases
2. Understanding that disruptive innovation requires Open Innovation, by partnering with companies that are building disruptive technologies
3. Investing in disruptive business that impact their cash flows
4. Developing central research labs

To successfully create disruptive innovation, it is crucial to combine central research labs with partnering up with start-ups.

Keynote #2: Open Science and the Dark Kinase: Inside-out Innovation in Big Pharma

Speaker: Dr. Maryann Feldman, Professor, University of North Carolina at Chapel Hill

Maryann P. Feldman is the Heninger Distinguished Professor in the Department of Public Policy at the University of North Carolina, an Adjunct Professor of Finance at Kenan-Flagler Business School and a Research Director at UNC Kenan Institute of Private Enterprise. Her research and teaching interests focus on the area of innovation, the commercialization of academic research and the factors that promote technological change and economic growth. Dr. Feldman is an editor of the Research Policy journal. In her presentation, Maryann presented her research on Glaxo Smith Kline, in which she focused on understanding the motives of big pharma to engage in inside-out Open Innovation.

Main takeaway 1: Open science offers interesting opportunities for a variety of industries
The big pharma industry is not an obvious candidate for Open Innovation, because of its expensive regulatory regime, great reliance on patents, and the focus on appropriability and value capture. The use of internal R&D labs in big pharma decreased, and big pharma companies increasingly search for other markets for technology, such as university tech suppliers and alliances. Pharma has increasingly engaged with open science, as can be for example be seen in the case of GSK; they started to increasingly publish on the topic, participate in structural genomics consortium, and initiated a GSK Protein Kinase Inhibitor set. Open science can be valuable for big pharma, by offering a strategic asset, increasing the search area, and changing the relationship with universities and internal R&D. Open science can also support the development of professional identity of big pharma employees, because scientists can strengthen their academic relationships, can see their work productively used and can also contribute to curing diseases.

Main takeaway 2: Basic science remains important
Internal research activity is diminishing within many companies, and the burden on universities is increasing to pick up the slack. The national institute of health in the United States is funding translational research centers. Instead of funding on basic research, funding increasingly stimulates research that aims at realizing value via translation of compounds towards revising incentives around university-tech transfers. We have to be concerned about the state of basic research, as a result of these kind of changes in funding. To change the focus, the basic research tools have to be reconsidered and redesigned. Open Innovation can provide solutions for the continuation of basic research, by exploring the opportunities that ecosystems for example can offer.

Industry Session #2: Leveraging Open Innovation for Doing Social Good

<u>Panel Keynotes</u>: *Preetha Reddy (Vice-Chair Apollo Hospitals), Mr. R. Mukundan (CEO Tata Chemicals), Lila Tretikov (CTO Microsoft), and Keith Strier (VP, Worldwide AI Nations Initiatives Nvidia)*

We have to understand the challenges that several industries are facing and how Open Innovation collaboration and experimentation can be done to make these industries futureproof. To do so, we need to empower the agricultural economy, which is the backbone of many countries in terms of Open Innovation. In this session, the discussants discussed how to accelerate knowledge and the distribution of knowledge, the democratization of knowledge and tools, and how digital platforms can be developed.

Main takeaway 1 (Apollo Hospitals): Experiment with new business models, to understand their usability in different contexts

Innovation has become more important than ever. Our original business models are skewed, and offer a tough test for leadership. We have learned from all kinds of business models, and have to understand their strengths and weaknesses. The pandemic has increased the realization that we have to work together to develop the business models of the future. It is all about collaboration and aggregation. We have to move beyond the original silo thinking, into saying what we can do to work with challenges such as the Covid-19 pandemic. Apollo has experimented with all kinds of business models. Prevention by using technology was an important element of their new models. AI was for example used to do a risk scan, to understand the risk of several diseases. Also a digital healthcare app was developed to digitally and agile connect the consumers and offer a platform for the risk scans. As a result, the amount of tele-consults, tele-radiology, and tele-clinics increased dramatically. Apollo's new business models have turned around the healthcare industry in India. Different business models are thus possible, and it is important to see the world, discover new business models and understand which of them can be successfully replicated.

Main takeaway 2 (Tata Chemicals): Co-create with the Best – R&D Partners, Universities, Business Teams to develop affordable solutions

To develop affordable and safe solutions for the bottom of the pyramid, it is important that organizations co-create with the best. Tata Chemicals has presented several examples, that show that co-creation can result in affordable solutions for problems, that the bottom of the pyramid is facing every day. These problems need to be definable, with a larger goal and mission in mind to create a large social impact. When starting a project in local communities, it is important to start solutioning for them. Only then, will they contribute. One example is a collaboration aiming at providing clean drinking water. Tata Research Development and Design Center, Titan Industries and Tata Chemicals came together to leverage learning from global best in class R&D available to develop a new solution for the removal of bacteria in water. The collaboration shared their knowledge and experience with institutions. The solution has been contiuosly developed, and has been turned into a ultra filtration system. Several challenges still remain, and therefore new partnerships have still to be found. The example shows that Open Innovation can stimulate the development of affordable solutions for the bottom of the pyramid. Open Innovation can aid India, by:

1. Creating a collaboration mindset based on mutual trust
2. Increasing the risk taking appetite by sharing internal information
3. Nurturing an Open Innovation culture, including flexible governance process that allows for rewarding experimental approaches and tolerance towards higher degrees of risk and failure

4. Enable a budget for success, to prepare for failing fast
5. Incentivizing collaboration, especially with start-ups
6. Develop a framework for corporates, accelerators, and incubators to partner with governments and start-up ecosystems, for joint innovation or ecosystem innovation
7. Convicting in the goal to develop sustainable solutions that deliver societal impact

When working with start-ups, it is important to understand that one must create processes to support them rather than completely engage them with processes and structures that large companies have. Big companies need to learn from the smaller ones, to understand how to remain agile, fast and to empower everyone. Within each organization, a shift has to be made from a control to a learning mindset.

Main takeaway 3 (Microsoft): Empower individuals

The pandemic created a lot of emphasis on coming together. Individuals have to be empowered. This has to be the vision for companies, to understand what technologies can do. Therefore, inclusive design is important to integrate people who are often overlooked. No matter where people come from, everyone should have the possibility to innovate and participate. It has be meaningfull, responsible and applied. Only then, business models can be transformed and the lives of people can be changed. AI can be used for social impact programs, and empower purpose-driven organizations to create positive social impact and achieve more. Another example on how Microsoft empowered individuals is their initiative to bring together over 1000 organizations, profit and non-profit, around a campaign. It required all organizations, such as blood system companies, pharmaceutical companies and academia, to build a network based on trust. The network could only exist when the citizens trust the work the network is doing. If there is no trust and empowerment, it doesn't matter what anyone is doing. All partners need to have the right mindset, to understand how the network can be made safe and attractive.We have to understand that we have to develop solutions that deliver value back to users, to be able to earn back and also create other economic ideas being generated for the users.

Main takeaway 4 (Nvidia): National AI programs require a combination of strategy, policy/laws, ecosystem and infrastructure

Only some organizations have a AI supercomputer. In a study, Nvidia has looked into universities and academia to understand which ones have access to AI supercomputers and which organizations do not. They found that the amount of supercomputers is related to the scale of the infrastructure. It is important to democratize the infrastructure that makes AI possible. The recipe for doing this, is developing a combination of strategy, policy/laws, ecosystem and infrastructure. To realize this, national government have to develop sponsorships and stakeholders have to be engaged. It is most efficient to have a small starter AI computer, that is powerfull, scalable and open. This enables organizations to really build something and to become part of a global community of AI innovators inspiring future generations.

Main takeaway 5 (Salesforce): Do well by doing good

Companies can thrive, while also doing good for society. It is important to collaborate, to create connectivity for everyone. This can be done by letting businesses function as a platform for change. These kind of platforms should be open enough to everyone, including NGOs and governmental organizations, so they can freely exchange data. Many people using platforms to do social good. Salesforce aims at doing good, by developing a trailhead training platform badges, that flourishes in India. The service is free, and has no

barriers. Users can get certified at no costs to the users. Trailhead is also used at universities. In addition to the trailhead program, Salesforce has developed several education projects in India such as the Kids Education Revolution Program. By educating people, Salesforce is educating workforce that could potentially also become Salesforce's workforce. In this way, Salesforce not only offers education for society, but is also educating their own personnel and future workforce.

Conclusion and takeaways

The organizations present at the WOIC 2020 belong to different sectors and backgrounds, come from different countries and are tackling different challenges. The event focused on understanding how threats can be turned into opportunities by using Open Innovation, to be able to lead in the recovery of the Covid-19 pandemic. Nonetheless, it is interesting to notice that some elements emerging from the discussions were recurrent in more than one of the presentations or discussions.

Here we summarize common takeaways that can be relevant for any company.

1. The strength of ecosystems

We observe a change from ecosystems with a pure focus on technological innovation towards ecosystems that aim at creating a social and/or sustainable impact. Complex societal challenges such as, for example climate change, Covid-19, and aging require organizations to jointly create value. Within industry boundaries, adoption of new innovations is only incremental, whereas collaboration across industries can create radical implementation of these new innovations. Ecosystems combine the strengths of a diversity of partners. The strength of these ecosystems is that they move beyond the mere company perspective, and are able to combine the strengths of different types of partners. The value within these ecosystems can only be realized when all partners trust one another and feel empowered.

2. Culture for change

Open Innovation can be nurtured by an Open Innovation culture, including flexible governance process that allows for rewarding experimental approaches and tolerance towards higher degrees of risk and failure. Exploration and exploitation require completely different organizational cultures. Exploitation focuses at managing the existing, while exploration focuses at creating something new. Exploration, on the other hand, encompasses high uncertainty, because it requires new business models and value propositions. It can be a challenge to combine these two different cultures within one organization. Despite it can be challenging to combine them, it is that combination that makes companies invincible.

3. Measurement of ecosystem health

Healthy ecosystems have strategic importance, because they can directly benefit members' economic performance and resilience. Healthy ecosystems foster durable growth opportunities and competitive advantages. When they are part of a healthy ecosystem, ecosystem orchestrators and members can increase their market share, create growth and innovation, and improve their market positions. Performance and health metrics can support organizations to develop a snapshot of the ecosystem to understand the organization's current situation, and check whether the strategic objectives have been realized. Metrics can support the ecosystem in understanding the ecosystem's dynamics, efficiency and evolution.

4. The Importance of Innovating Business Models

Innovation in market economies requires more than developing new and improved technologies. Innovating a better business model is often superior to creating a better widget, and is necessary to manage the risk of disruption. The Covid-19 pandemic is creating challenges for many traditional business models, while stimulating and accelerating new business models. Digital transformation is an important element in this shift, and companies that were already engaged in digitizing their processes and workflows have held an advantage during the pandemic. Companies need to develop processes to test and innovate their existing business models, and need new processes to explore potential future business models.