

BACHELOR'S THESIS

Using social media to boost Indo-European research & innovation

Johanna Peltola

Bachelor's Thesis

May 2014

Media Programme

TAMPEREEN AMMATTIKORKEAKOULU

Tampere University of Applied Sciences

ABSTRACT

Tampere University of Applied Sciences
Media Programme

JOHANNA PELTOLA:

Using social media to boost Indo-European research & innovation

Bachelor's thesis, 72 pages, appendices 3 pages
May 2014

Social media is an important technological trend that has significant implications on the world economies. Its transformational impact is changing the ways of communication, and making communities more interconnected than ever. This thesis explored the implications of social media for research and innovation, with a focus on Indo-European collaboration. Secondary research looked at the status of online social networking in India, and how individual members of the science community could use these tools to become the brand ambassadors of their respective institutions, while advancing the collaborative efforts. This study aims to help stakeholder organizations, including funding agencies evaluate the value of a successful social media strategy. The survey conducted as a part of the research was targeted mainly to India-based small and medium sized enterprises to better understand how this important group of stakeholders can be reached on digital platforms to drive the agenda of Indo-European science collaboration. The findings show that the targeted stakeholders are actively using multiple social media channels, and wish to access information on research & innovation activities through them. The results also indicate that these opportunities in the Indo-European context are still unknown to many. The global interconnectedness of the digital communities entails new opportunities for all the stakeholders. Finding information, networking and nurturing connections are all happening online. This needs to be addressed when planning an effective digital communication strategy.

Keywords: social media, research, innovation, european union, india.

ACKNOWLEDGEMENTS

Foremost, I would like to express my sincere gratitude to my mentor and colleague Nagendra Singh Rathore for his support, inspiration, and for sharing his immense *gyan* (Hindi for 'knowledge'). Moreover, I would like to thank the Innovation Counsellor Riku Mäkelä from Tekes New Delhi for his support and the exciting opportunity to work with the Finnish Funding Agency for Technology and Innovation, my thesis advisor Sohvi Sirkesalo from TAMK, and my friend Ula Jackowska for the encouragement, and an abundant stash of resources.

TABLE OF CONTENTS

1	INTRODUCTION.....	6
1.1	Rationale and the objectives of the study.....	6
1.2	Scope and limitations.....	8
1.3	Methodology, reliability and validity.....	9
1.4	Partner company: Tekes.....	9
1.5	Personal background and interests.....	11
2	BACKGROUND.....	12
2.1	Digital society and the communicational shift.....	12
2.2	Indo-European research & innovation.....	13
2.2.1	EU Framework Programmes.....	14
2.2.2	Societal relevance.....	15
2.3	Definition of key concepts.....	16
2.3.1	Social media.....	16
2.3.2	Social networking service.....	16
2.3.3	Innovation.....	17
3	REVIEW OF SOCIAL MEDIA USE IN INDIA.....	18
4	NEW TOOLKIT FOR THE RESEARCH COMMUNITY.....	21
4.1	Possibilities.....	21
4.2	Openness and transparency in research.....	23
4.3	Twitter and the virality of science.....	24
5	CURRENT PRESENCE & BENCHMARKS.....	27
6	SURVEY DESIGN AND IMPLEMENTATION.....	31
6.1	Hypothesis and target group.....	31
6.2	Validity and reliability.....	32
6.3	Survey software.....	32
6.4	Survey design.....	34

6.4.1	Likert-scale.....	35
6.4.2	Multiple choice.....	36
6.4.3	Open-ended questions.....	36
6.5	Pre-test.....	37
6.6	Dissemination.....	38
7	SURVEY RESULTS.....	40
7.1	Organization and industry.....	41
7.2	Geographical location.....	45
7.3	Background in research & innovation.....	46
7.4	Awareness of Indo-European research & innovation.....	48
7.5	Social media usage.....	51
7.6	Effects of social media on research & innovation.....	64
7.7	Comments, questions, concerns.....	66
8	CONCLUSIONS AND SUGGESTIONS.....	67
	REFERENCES.....	70
	APPENDICES.....	73
	Appendix 1. Stakeholder framework.....	73
	Appendix 2. Survey form: Indo-European research & innovation.....	74
	Appendix 3. Cover email for online survey.....	85

1 INTRODUCTION

This chapter introduces the topics covered in this thesis, and presents the rationale, objectives, scope, limitations and the methodology used in the study.

1.1 Rationale and objectives of the study

The purpose of this thesis is to help the European Union and its Member States to discover how social networking services could be further leveraged to boost the awareness of Indo-European research & innovation collaboration in India. The research looked into the current status of Indo-European research & innovation on social media, while providing analysis of it. Finally the survey results give an idea of how the targeted stakeholders are currently using social media and how those services could be used to further promote Europe in India, especially as an attractive hub for researchers and innovators.

Several reports, including 'A Study of European Researchers working in and collaborating with India' (2010) have been used for the background research. The need to disseminate information more efficiently was addressed, though there were no reference to social media. This thesis addresses the ever-increasing role of online media and social networking platforms as a significant aspect in the communication strategy of European stakeholders to reach out to prospective research & innovation partners within India. "With proper networking and availability of information, there is greater potential for cooperation, collaboration and mobility. A big constraint is a lack of timely information." (A Study of European Researchers working in and collaborating with India 2010).

Addressing the availability of timely information as a big constraint has been discussed in this study as one of the key problems. The study aims to find out which platforms would be the most relevant to use for the purpose of disseminating information about the research & innovation, and what kind of content the audience would like to find on these platforms.

According to Denis Dambois, Head of Innovation & Research at Delegation of EU to India, only a fragment of potential research partners are currently reached through the promotional activities that are being carried out in India. These activities include networking events and 'roadshows' that aim to promote the bilateral Indo-European research programmes by increasing the awareness of such programmes in major cities. Dambois says that these activities are currently the main channel for distributing such information, and that there is much room for development in the communication strategy. (Dambois 2014).

Pavel Svtil, Minister Counsellor Debuty Head of Delegation at the Delegation of EU to India says: "The language of the R&I specialists is often very technical and difficult to understand for normal public. It is difficult to have a separate channel for R&I communication. So finding appropriate balance between technical and common language is quite a challenge." (Svtil 2014)

According to a survey and report by The Evaluation Partnership (2010, 47), the Indians involved in the collaboration stated that "Europe-Indian research collaboration has run out of steam and must be 'steamed up' again". The respondents quoted in the same report addressing the communication related issues in Indo-European research & innovation collaboration said that "there is a lack of information and resources. It is hard to find the right people to cooperate with, and there is no service for this." (A Study of European Researchers working in and collaborating with India 2010, 63).

Based on the findings of the secondary research and expert interviews, this thesis suggests that social media should be given due emphasis in the communication strategy. Social media is intertwined in the lives of the Indian stakeholders of Indo-European research & innovation collaboration. If first impressions matter, social media presence can play a huge part in creating these online impressions.

The major strategic objective behind this thesis and the suggested implementations in the communication strategy is to increase awareness of Indo-European collaboration opportunities in India. With higher awareness, the quantity of Indian

researchers and organizations taking part in collaborative projects with European partners can be increased, eventually resulting to higher quality of applications.

1.2 Scope and limitations

This study was conducted to determine the current status and future possibilities of social media as a connector of science communities in Europe and India. It aimed to explore how Indo-European research & innovation activities are currently presented online to Indian stakeholders. The study started on January 2014 and ended in May 2014, taking roughly five months to complete.

The secondary research explored social media use in India to understand the digital landscape in the country and make informed decisions in terms of communication strategy. It also looked at how individual researchers could promote themselves and their respective institutions more effectively through social media channels. This is seen as an important aspect of increasing the overall dissemination of research and innovation related information, by harnessing the researchers themselves to use social media.

The large framework of stakeholders involved in the Indo-European research & innovation is presented in the appendix number 1, which displays the stakeholders on each level and their interests. The framework covers individual, industry, and government stakeholders. This study does not look at each group individually, but rather gives suggestions that benefit everyone in the context of Indo-European research & innovation activities.

The questionnaire survey was focused and targeted mainly at representatives of the private sector, especially small and medium sized enterprises located in India, although a number of responses was received outside of this stakeholder group. SME's are considered an essential contributor in driving the collaboration, but have been left without sufficient attention. According to Head of Research & Innovation in the EU Delegation to India at European Commission, Denis Dambois (2014), the

participation of the Indian private sector in Indo-European research projects is low, and the issue needs to be addressed.

1.3 Methodology, reliability and validity

An extensive desktop research and evaluation of various resources has been conducted for the purpose of this study. Sources include mainly articles and reports found on online websites, as the focus of the thesis was very topical and therefore required the most up-to-date information which was predominantly available through online sources. The online sources used as references were verified to publish reliable content on a regular basis. Referrals are mainly made to established and notable online publications, which usually also have their offline counterparts.

The primary, qualitative research included semi-structured, open-ended interviews with selected experts to map the current activities and future plans regarding the communication strategy of European Union, especially its India Delegation. The interviewed experts were involved in European Union's research & innovation sector, and were thus qualified to answer the questions.

The primary research also included an online survey of 23-24 questions (the number of questions depended on the type of the organization the respondent was working in) regarding the use of social media and awareness of Indo-European research & innovation collaboration. The survey was specifically designed to derive relevant responses and opinions, and mainly targeted to small and medium sized enterprises located in India. It was sent to 213 prospective participants in India by email, and additionally shared on selected LinkedIn groups that were assumed to have members representing the target audience.

1.4 Partner company: Tekes

This thesis is prepared in collaboration with Tekes, the Finnish Funding Agency for Technology and Innovation, particularly its New Delhi branch. Tekes is part of

Team Finland network that promotes Finland and its interests abroad. In Finland, Tekes is the main public funding organisation for research, development and innovation. Tekes funds wide-ranging innovation activities in research communities, industry and service sectors and especially promotes cooperative and risk-intensive projects. Tekes' current strategy puts strong emphasis on growth seeking SME's.

Tekes promotes research and innovation collaboration between Finnish and Indian companies and universities through Tekes programmes and joint funding calls. Currently, 10-25 projects between Finnish and Indian companies and research groups get funded annually. Attracting Indian companies and investors to Finland and vice versa, and strengthening the flow of knowledge to and from are at the heart of its activity.

The major areas of collaboration between Finnish and Indian partners are health care, clean technology, education, smart cities, digitalization, and frugal innovation.

Tekes was recently evaluated as having performed well and being among the world's leading innovation funding agencies. Through its activities, Tekes has contributed to increasing research intensity, increased cooperation between companies and knowledge infrastructure in Finland, and thus helped to build competence to increase the international competitiveness of Finnish enterprise. (Evaluation of Tekes 2012.)

1.5 Personal background and interests

The topic for this thesis got initiated during the author's international internship in Ahmedabad, India in 2013. The internship was realized through AIESEC, the world's largest student-led organization. The author was working with Prabhavya, a start-up based in Ahmedabad. The company is an interactive communications agency covering digital marketing, social media and brand management. Through the daily work the author developed an interest in the mentioned topics and decided to implement the accumulated knowledge into a thesis, which also left her with a lot of scope to learn more.

The New Delhi based branch of Tekes partnered with the author as it was in the organization's interests to find out how they could benefit from using social networking services in promotion and dissemination of their organizational activities in India. The scope was later revised to reflect the whole of European Union, not solely focusing on a single country or a single organization. This would then help a larger group of European research & innovation stakeholders in their communication to Indian stakeholders.

2 BACKGROUND

This chapter presents the theoretical basis of this thesis including the shift in communicational patterns enabled by online social networking websites, and takes a brief look at the background of the Indo-European research and innovation collaboration, while explaining its societal relevance.

2.1 Digital society and the communicational shift

World economies are going through a digital transformation and the ongoing change is pervading all parts of the society. Collaboration and collective commitment now happen on a new level that has not been possible before the internet and social networks that now permeate it. Social networking services are the new infrastructures of communication, enabling a global platform for open exchange of information, interaction and collaboration between individuals, for profit & non-profit organizations, and governments

Whereas the increasing interconnectedness has challenged the traditional communication patterns, it has become vital for organizations of all kinds to stay up-to-date with the digital communication trends to maintain their competitive edge. The emergence of the digital economy is setting new standards and requirements for factors that drive economical growth. Research and innovation activities are essential for a society that looks to develop, grow and flourish sustainably.

Social media is transforming the way we interact with each other. Blogs, wikis, social networking sites such as Facebook and Twitter, are all contributing and shaping the future of online communication. This change touches everyone with an access to internet, and its potential can be leveraged in a number of situations, the agenda of the science community being no exception. This thesis discusses the possibilities that social networking services could bring to the global scientific

community, while keeping its focus on Indo-European research & innovation collaboration.

David Tunney from Head of New and Social Media Networks in the Strategic Communication Division of the European External Action Service (2014), explains what kind of change is taking place when asked about the value of social platforms to EU Member States:

There are several EU Member States –and Foreign Ministers which are using social media and digital tools extensively. For several countries it has become an essential part of their diplomatic outreach whilst for other countries they are just finding their feet at the start of their use of their tools. Whatever the situation in each Member State it is clear that the situation will evolve and that social media – in whatever forms it may take – will play an increasing role. (Tunney 2014.)

2.2 Indo-European research & innovation

India-EU relations date back to the earliest days of European integration, with agreements stretching back to the 1960s. India was one of the first countries to establish diplomatic relations with the EEC. The modern-day EU-India relations are based on the 1994 Cooperation Agreement that extended the common affairs beyond trade and economic cooperation. (The India-EU Strategic Partnership Joint Action Plan 2005.) Today India and EU can be seen as leaders in their respective regions, EU as the anchor for the European continent and India for South Asia.

European Union and the Republic of India broadly share a common vision for world affairs, and have built a strategic partnership to push the global agenda on emerging challenges such as climate change, poverty and terrorism. Energy, environment, global change, and human health are identified as major fields of common interest.

The collaboration in science and technology sectors between the countries dates back to the mid-1980s and has led to over 150 joint research projects today. The India-EC Science and Technology Cooperation Agreement entered into force on 14 October 2002, and has been a major milestone in bringing together the science & technology expertise for the mutual interest of both parties. (The India-EU Strategic Partnership Joint Action Plan 2005.) There is still much potential to enhance the collaboration especially in emerging high-tech areas under the international dimension of the EU's Horizon 2020 research & innovation programme and other similar frameworks.

Cooperative activities under the Agreement include the participation of Indian institutions and scholars in the projects funded by the framework programmes, joint projects, the pooling of projects, the mobility of researchers and the exchange of information and equipment.

2.2.1 EU Framework Programmes

The European Union's Framework Programmes that this thesis discusses are also called Framework Programmes for Research and Technological Development. Based on the period of time, they are named from FP1 to FP7. The newest ongoing Framework Programme was named as 'Horizon 2020' instead of FP8. Inno Indigo is an innovation driven initiative for development and integration of Indian and European research. The main objective of these programmes is to support and foster research and innovation work in European Research Area (ERA).

By October 2011, EU-India cooperative activity included 166 research projects: 11 under the coordinated calls, 152 under the open calls and 3 under international cooperation initiatives. 22 projects were in the category of Marie Curie International Research Staff Exchange Scheme. (Review of the S&T cooperation Agreement between the European Union and the Government of the Republic of India 2007-2011.)

2.2.2 Societal relevance

Research and innovation are the foundation stone of a growing economy. Innovation is the primary driver of European Union's economic growth, and its best bet to get its lagging economical development back on track. Investments in innovation and research often mainly drive long-term growth, and the rate of return regarding publicly funded R&I activities is considered high. (Innovation Union 2013.) Financial returns are barely half the story. Innovation can be the humanity's best tool to tackle major societal challenges taking place in Europe and globally, such as the rapidly ageing population, unemployment, poverty, food and water crisis, global warming, and pollution.

Investing more efforts to promote research & innovation holds a value proposition to improve the competitive edge of Europe as a whole. The numbers say more than words: research & development intensity has been growing 30 times quicker in China than in Europe since 2000. In the time of increasing globalization, there is a demand to build stronger networks to the emerging powers in science & technology. Competitiveness and innovation are seen as keys to enhance growth and employment and to address the inadequate EU performance and productivity. (Review of the S&T cooperation Agreement between the European Union and the Government of the Republic of India 2007-2011.)

India makes an attractive partner for research and innovation as it has a vast talent pool with a top level science and technology knowledge. It is the world's biggest democracy, the most populous country, and among the world's fastest growing economies, that make it an indispensable emerging market.

With the adoption of the Europe 2020 Strategy along with Innovation Union, and with the launch of India's Decade of Innovation programme, the impact of research and innovation on economy and society has been widely stressed both in Europe and in India. (Review of the S&T cooperation Agreement between the European Union and the Government of the Republic of India 2007-2011).

2.3 Definition of key concepts

The following section includes brief definitions of the concepts used in the thesis.

2.3.1 Social media

Social media is the interaction among people in which they create, share or exchange information and ideas in virtual communities and networks. Andreas Kaplan and Michael Haenlein define social media as "a group of Internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user-generated content." Furthermore, social media depend on mobile and web-based technologies to create highly interactive platforms through which individuals and communities share, co-create, discuss, and modify user-generated content. They introduce substantial and pervasive changes to communication between organizations, communities, and individuals. (Wikipedia 2013.)

2.3.2 Social networking service

A social networking service is an online service, platform, or site that focuses on facilitating the building of social networks or social relations among people who, for example, share interests, activities, backgrounds, or real-life connections. A social network service consists of a representation of each user (often a profile), his/her social links, and a variety of additional services. Most social network services are web-based and provide means for users to interact over the Internet, such as e-mail and instant messaging. Online community services are sometimes considered as a social network service, though in a broader sense, social network service usually means an individual-centered service whereas online community services are group-centered. Social networking sites allow users to share ideas, activities, events, and interests within their individual networks. (Mashable 2014.)

2.3.3 Innovation

Innovation as a word refers to the creation of new or significantly improved products and processes that add value to the markets, governments, organizations and society (Innovation Union Pocket Guide 2013).

Innovation is everywhere around us. Look at the smart phone in your hand. Through a few clicks, you are able to connect with your friends on social media on a small portable device in your hands. Those are examples of innovation, that have transformed millions of human lives over the last decade. Today they are an essential, unquestionable part of our daily lives. Innovation is a crucial component in development of new products, services, and processes, as well as in improvement of existing ones. Today organizations need to actively innovate to stay ahead of the competition.

3 REVIEW OF SOCIAL MEDIA USE IN INDIA

This chapter aims to provide topical information and a general view of the current status of internet and social media use in India, while especially focusing on organizational use. This part of the study is based on secondary research and provides understanding of how various social media platforms perform in India.

India has the third largest base of internet users in the world comprising of more than 238 million users. It includes more than 100 million active users on various social media channels, including Facebook, Twitter and LinkedIn. The absolute numbers are impressive, despite the fact that India still has a very low overall internet penetration. The social media landscape in India is still on its early stages, but with a very promising beginning. Indian organizations are using social networking services more than the global average, including their counterparts in other emerging economies (Ernst & Young 2013).

The importance of social media on a national level was seen during the Indian election on spring 2014. It was widely referred to as "social media election" where the candidates were fiercely competing for the attention of the youth and tech-savvy first time voters on social media spaces. The importance of an active Facebook page for facilitating conversations or a YouTube account providing video material of topical activities played a role equally important to any campaigning activity. (CNN 2014.) Social media platforms have established their vital role in community building among urban Indians.

India as a largely sociable nation is a fertile ground for social media services to flourish. The people of India are fond of interaction and communication: they like to go out, meet a lot of people, and make a lot of friends. This behaviour is reflected in the number of fans and interactions Facebook brand pages receive in India, compared to their counterparts in the United States. (IDG Connect 2013.)

Sydney-based social media blogger at Social Skinny, Cara Pring, says that Indians view social networking differently than Americans do:

Indians, she says, "want to use social networking in the real, true sense of the term—to grow their network in a social manner using whatever platforms are available to them. That doesn't mean just the people they know. They are eager to connect with anyone they find interesting or that has something in common anywhere around the world. This is also why Twitter has exploded in India, because approval isn't required to follow someone on the network." (Bloomberg Business Week 2012.)

The most used and favourable social media platforms among Indian organizations were Facebook, followed by Twitter, YouTube and blogging (Ernst & Young 2013), which have been included in the questionnaire survey conducted as a part of this thesis. LinkedIn, a social network designated to professionals, has the world's second largest user base in India with its over 26 million users (Social Bakers 2014). The users also spend the second highest average time on LinkedIn, right after Facebook (Social media: GenY... 2013).

The prevalence and popularity of Facebook among Indian users are evident as stated in the national newspaper and the world's largest selling daily, Times of India. According to the paper, the social networking service had crossed 100 million user mark in the country on 31st March 2014, making it its biggest user base after United States (Facebook crosses 100... 2014). After setting up their first office in Hyderabad, India in 2010, the number of Facebook's Indian users have gone up from initial 8 million to 100 million in less than four years. Facebook's technology initiatives to increase connectivity making it more accessible to Indian residents will drive the growth trajectory further towards one billion users. The recent buyout of the globally popular mobile instant messaging service WhatsApp will speed up the Facebook growth in India as many access the platform through their mobile phones (How WhatsApp buyout... 2014).

The platform has been picked up rapidly which is partly due to the wide use of mobile phones. According to Facebook, a striking 84% of the Indian Facebook users access the service mainly on the mobile. (Times of India 2014.)

Neha Dharia, an analyst with UK-based research firm Ovum shares an optimistic vision of the social networking platform's future: "If Facebook continues its current growth trajectory, we can see it as a core communications tool for the world" (Facebook crosses 100... 2014).

The coming-of-age story of Twitter in India is steadily unfolding as the platform keeps growing and gaining followers. Market research company IMRB and the Internet and Mobile Association of India (IMAI) estimate that Twitter currently has a user base of around 22 million in India (Firstbiz 2014). Being a vast emerging market with an increasing access to internet and a growing number of mobile devices being used to connect to social networking services, Twitter has introduced a variety of actions to drive its success story from recent top-level hires to new office spaces around the country. As a measure to grow the Indian user base, the company has also partnered with Truecaller, a phone directory application. The users of Truecaller will now be able to see if a phone number is connected to a Twitter account, and then follow or Tweet to the user directly from the app (Firstbiz 2014). Advertising and PR firm, Ogilvy handling Twitter's media campaign, states that "Detailed plans are still under wraps, but an official announcement to unveil them is expected soon" (Hindu Business Line 2014).

4 NEW TOOLKIT FOR THE RESEARCH COMMUNITY

4.1 Possibilities

Online social networking is now so widespread that it is taken for granted in everyday life – but what about in the academic community? Increasingly, researchers are using the same kinds of Web 2.0 tools they rely on for their social life in their scholarly work to make contacts, find colleagues in the same field, collaborate, and share data and expertise. (Digital Apps for Researchers 2010.)

Social media covers various web applications with a strong focus on communication and collaboration among the users. Online social networking platforms provide a myriad of opportunities for the academic community from promoting a research paper to finding a suitable project partner. They enable people to share ideas and knowledge, regardless of title, experience, or educational background. This opens up new collaborative spheres in the realms of research and innovation, and everybody is able to join. Many researchers have already adopted the social platforms as essential tools of trade. They can support the scientific community in many ways helping to facilitate interactions and relationships by providing a networking platform to create new and maintain existing connections, and inviting the wider audience to engage with the research projects.

The following list by Economic and Social Research Council (2014) gives an idea what kind of content and interaction can be facilitated through social media in relation to the science community:

- communicate directly and quickly with others who have an interest in your research work
- develop new relationships and build networks
- reach new audiences, both within and outside academia
- seek and give advice and feedback

- generate ideas
- share information and links, e.g. journal articles and news items
- keep up-to-date with the latest news and developments, and forward it to others instantly
- follow and contribute to discussions on events, e.g. conferences that you cannot get to in person
- express who you are as a person

(Economic and Social Research Council 2014.)

Social media gives researcher a platform to display expertise, and establish oneself as a professional. The online platforms enable direct communication with others who share an interest in one's research work not only inside one's own community or academia, but even outside of it. Hence, through social media one can reach an audience that would never otherwise get involved given the usual circumstances. It provides tools to facilitate and take part in industry conversations, reach out to prospective partners and stay in touch with existing ones regardless of the location. In the context of Indo-European research and innovation collaboration, social media can provide valuable channels for information sharing and cooperation. These online tools can be used to facilitate open discussion and engage in it proactively, while building the dialogue between the countries.

Not only the research organizations, networks, and universities may boost their brands and disseminate information more effectively, but also the individual researchers and research groups, those affiliated with EU-funded frameworks, are in a key position when it comes to driving the connections between the two research communities. They have the power to be the most effective ambassadors for their respective institutions and networks.

If the individual researchers and scholars make an effort to disseminate the papers and information concerning their work, the affiliated institutions also get their part of the publicity, provided that the institutions are mentioned and linked to in the online materials such as Tweets and blog posts, and the descriptions of the account owner (e.g. 'About Me' page on a blog platform). To further encourage researchers towards this kind of activity and eventually make it a common practice, it is

recommended for the institutions to instruct their scholars in social media use. One practical way to do this is to provide an online guidebook which is a practice acquired by many prominent institutions, such as UK's Research Innovation Network (2011). The highly informational guidebook can be found on a PDF-form on their website available for anyone to download, but mainly targeted for the researchers to be able to make an informed decision on whether and how to use social media to their benefit (Research Innovation Network 2011).

Debate and discussion for and against the use of online social platforms to advance the agenda of scholars is ongoing. Benefits and possibilities are easy to spell out, but there are challenges too. Open innovation might be the blessing of our time entailed by the digital economy, but for now the scientific publishing houses see it exactly as the opposite. The nature of the social networking platforms is just that, social. These channels are not one-way tunnels for the organizations to broadcast their message as it has been with the traditional media. Such attempts usually fail sooner or later. The communication in social media works to both directions, while encouraging participation. Being social on the web calls for transparency, and this is something not every organization is ready for.

4.2 Openness and transparency in research

Open access refers to the free access and reuse of scholarly works and research results without added fees. The open access and transparency have challenges too. Science is not all about collaboration, there is a lot of competition as well. Harnessing the full potential of social media in advancing scientific work and communication still requires a significant change in the general mindset and policies regarding open access. Researchers are not always willing to share the results of their work, and not even able to, if they are tied to the publisher's rules. Science publishing houses take their slice and usually own the rights while restricting or making it impossible for the researchers to freely share their papers. This is the greatest challenge on the way towards open access. Many questions still remain open as the prevalent business model of academic publishing houses is currently being challenged by the advocates of open access. Internet and social

networking services are at the heart of this revolution.

The reports show, that results and implications of research and innovation work are rarely visible outside the affiliated institution. In fact, they might only be accessible to the selected few. There is a significant lack of transparency for deliverables of European Union funded research projects, as it has been further explicated below in case of the projects affiliated with EU framework programme FP7:

The evidence provided by the CORDIS database shows that, while the vast majority of FP7 projects have an individual website, the deliverables are available online only for the 20% of them and only for 24% some documents and intermediary reports are accessible. The list of deliverables is presented only by 24%. The tentative conclusion is drawn in the Report that there is a notable lack of 'transparency' for 2/3 of the projects in relation to their results. (Point 5 in Agreement Weaknesses - Review of the S&T cooperation Agreement between the European Union and the Government of the Republic of India 2007-2011.)

The low accessibility of research papers requires changes in the standing policies. Talking about the recent progress, Martin Hall, Vice Chancellor at the University of Salford says that the institution has recently implemented an Open Access mandate to self-archive: "The reason we decided to adopt this approach is that evidence shows that research published online has higher citations and can also be used as a way to promote our competitiveness internationally" (Value of open... 2010).

4.3 Twitter and the virality of science

Can one say anything of academic value with only 140 characters? In a community that produces papers containing tens of thousands of words, many might not agree, but the world's most popular microblogging platform is quickly becoming more popular as a tool of communication among the members of academia. (The London School of Economics 2011).

Twitter used to disseminate the message of host institutions by individual researchers and scientists can be seen as an indirect way of promotion when it comes to the institution's public relations and reputation building. It should be remembered that social media is essentially all about community and interaction between the community members. Thus, driving the growth from the inside starting on a grass-root level might bring positive results in the long run, when individuals acting as the brand ambassadors of their institutions disseminate the message on their behalf.

Twitter provides an opportunity for scientists to bring their research to the awareness of a wider audience. This has a potential of helping them in gaining individual merit, as well as building their respective institution's reputation. Following is a true story of two PhD students from the University of Sheffield and how their space science experiment went viral on social media.

Alex Baker and Chris Rose, were two PhD students that sent a helium balloon up to the edge of space, with two cameras in an insulated box suspended below. They uploaded the resulting footage on YouTube, along with an explanation of how they built the device, with the whole endeavour costing only £350. What's most remarkable about this story was how I came across it – one of their fellow students posted it on Twitter, and I happened to come across the tweet as it mentioned @sheffielduni. Once I had got the extra details from the students and chosen the pictures, the release needed to be written. This wasn't the first time amateurs had sent up a device, but the low cost made it unusual. Over the next week, it was featured on the BBC and Channel 4 news websites, various local papers and radio stations, Coverage for a story tends to generate interest from other media, so the news release was only the springboard. I even got calls from a Ukrainian magazine and Norwegian newspaper. Eventually it ended up with Alex and Chris being interviewed on ITV Daybreak, which I watched while mentally begging Christine Bleakley to mention which university they were from. (Going Viral: Using Social Media to Publicise Academic Research 2011.)

The brevity, accessibility and immediacy of this platform are appealing to many academics. Digital-savvy researchers are using the platform to communicate their study results, get feedback and maintain and create connections with their peers via short messages. While many still raise their eyebrows, the conversational nature of the platform well serves the purposes of the science community offering an advantage to the experimenting minority.

"The microblogging platform Twitter is purposefully designed to exchange information and to facilitate reciprocal communication and attribution, therefore enabling the creation of communities of individuals interested in common topics." (Priego 2011)

As an example of using social media to advance scientific work, The Public Policy Group of London School of Economics believes that the platform holds true value for science communication and has therefore produced a Twitter guide that aims to help academics to join Twitter and get the most out of the micro-blogging platform (LSE produces new... 2011). The tips range from adopting various tweeting styles to match the content and intended target audience to crowdsourcing research activities. The guide prompts the researchers to retweet and cover interesting material produced by other researchers outside their own institution as well, even though it could be easily seen as supporting competition. However, collaboration is the key to tackle the main challenge in most research areas: bringing the whole area of research to a wider attention, and thus build and maintain high-quality networks, help everyone keep up to date, and eventually attract more funding to the research area as a whole.

Collaboration truly is the key, not the promotion. Twitter provides an opportunity for crowdsourcing research across sciences; gathering information, undertaking data analysis, transcribing and editing documents, and making observations can all be part of the digital-savvy academician's Twitter strategy. Even research funding may be crowdsourced from interested public bodies through it. The platform does not only solve a problem of information dissemination, but might actually change how science is done.

5 CURRENT PRESENCE & BENCHMARKS

According to Denis Dambois, using social media to drive the communication agenda of Indo-European research & innovation is still in the initial phase and there is room for improvement. The on-ground road shows are currently the main channel to reach the audience in India (Dambois 2014), despite the rapid rise of social media use in the country. Collaborative research projects are occasionally advertised on local newspapers too, e.g. Times of India.

Some of the EU-affiliated research & innovation programmes and networks currently have a social media presence mainly on Facebook and Twitter. This chapter specifically looks at the current online and social media presence of Delegation of European Union to India, and benchmarks the social media presence of British High Commission in India for comparison of these two similar entities, both sharing information regarding research & innovation between the countries.

The Delegation of European Union to India is represented online as 'EU in India'. EU in India has an actively updated Twitter account (EU in India on Twitter 2014) on which it is seen as having assumed a set of best practices, such as using hashtags related to the topics discussed, abbreviating links with a link shortener is also used (Picture 1).



PICTURE 1. EU in India on Twitter

The Delegation of European Union to India has an established presence on Facebook with their 'EU in India' page with over 11,000 members. The posting activity is regular. The content topics include information about topical events,

news, interviews with experts, and EU programmes & initiatives. Majority of the content does not invite its audience for interaction, but a recently arranged EU competition with a prize makes an exception. The competition is only available on Facebook, and requires liking the page too, which is a common means to attract new likes to the page. As important as attracting new likes and growing the numbers is, it is even more worthy to maintain and nurture the existing relationships. Lot of communication happens on social media, and as it is a two-way channel, any messages from the audience should be addressed. EU in India does not actively commit to this, as it can be seen on their page. There are several comments which could have been addressed by the page administrator, but have not.



The image shows a Facebook post from the page 'EU in India' with a sub-page 'EU competition'. The post is titled 'European Union Online Competition' and has 1 like. The main content is a graphic featuring the European Union flag (a blue circle with yellow stars) and several circular icons representing various items: a smartphone, a laptop, a green umbrella, a green folder, and an orange folder. Below the graphic is a quiz with three questions:

How many member countries does the European Union have? *

18 24 28

What is the motto of European Union? *

Unity in Diversity United in Diversity United we Stand

The EU was awarded with which of the following prestigious prizes in 2012? *

World Development Award Nobel Peace Prize Global Peace Award

Email Address : *
You will be contacted by email if you are one of the winners

Phone number: *

At the bottom of the form is a green 'Submit' button.

PICTURE 2. European Union online competition on Facebook

To get as informed picture as possible of the potential of social media for EU-India activities, it is necessary to look at exemplary representations of similar entities. In this case, British High Commission in India was benchmarked, and the benchmarking has been further explicated below.

British High Commission New Delhi has a noteworthy social media presence while using a versatile combination of channels for a variety of content. Besides the actively updated Facebook and Twitter accounts, the British High Commission New Delhi maintains a plethora of other social media channels to support their various activities. These include the photo sharing service Flickr, YouTube, LinkedIn, Storify, Eventbrite, Foursquare and blogs. In addition to the core activities such as events, news, programmes and initiatives, the page also posts more generic content. The nature of the content is overall more engaging than the content on EU in India page as many of the posts call for interaction. The British High Commission New Delhi shares plenty of generic content via other pages. This makes it easier in regard to page maintenance, as they are not producing the content themselves. For example, below is an image of a post share on UK in India's page via 'Love GREAT Britain' page on Facebook. Sharing this type of content makes the page more lively and interesting as opposed to a page that only shares content focused on core activities.



PICTURE 3. British High Commission New Delhi's post share on Facebook

The following table makes a comparison between the performance indicators on Facebook and Twitter pages of EU in India and British High Commission in New Delhi.

TABLE 1. The Facebook statistics as of 21 May 2014

Facebook page	Likes	Talking about this
EU in India	11,904	320
UK in India	93,532	248

Looking at these numbers, it can be seen that the number of likes is significantly higher for UK in India Facebook page, whereas the number of people 'talking about this' is more or less the same. The number of likes simply indicate that a like button has been clicked. 'Talking about this' has a higher value to a page, as it indicates the number of people who are currently interacting with it; commenting, liking posts, or sharing. A big number of likes does not always indicate a buzz on the page, which makes it a more worthy measure to look at.

TABLE 2. The Twitter statistics as of 21 May 2014

Twitter handle	Followers
EU in India	566
UK in India	5,382

These numbers can merely act as a reference of the page success. The page can be said to be successful when it is serving its real purpose, and giving return on investment. The deeper analysis of the users interacting with the page is recommended, so that the content can be accustomed according to their requirements, and hence attract more interaction.

6 SURVEY DESIGN AND IMPLEMENTATION

Online surveys are often used in academic research work, as they are a convenient way to gather data for the study. One questionnaire survey was designed and administered as part of this study. The following chapter describes the background research, design process and implementation of the survey.

6.1 Hypothesis and target group

A hypothesis was formed to clarify the goal of the survey. Based on the secondary research, the hypothesis assumed that the targeted stakeholders are actively involved in social media, and that the information concerning Indo-European research & innovation could reach them through selected social networking channels, but that the content is not efficiently promoted and disseminated to the audience through those platforms. Hence this survey seeks to collect data to back up the claim that there is a need to include social media as a solid part of the communication strategy of the instances that wish to further the cause of Indo-European research and innovation, and that the target stakeholders are using the same platforms. Defining the goal for the survey helped to construct the right kind of questions and extract only relevant data.

The survey intended to collect data on the current social media usage of the targeted stakeholder group which consisted mostly of small and medium sized enterprises based in India. It also measured their current level of awareness and familiarity of research & innovation opportunities with European Union and its Member States, and the feasibility of disseminating information on the same through social media.

6.2 Validity and reliability

To get reliable and actionable data, the survey questions were designed to be methodologically sound while issues with bias and inaccuracy were minimized by using certified question format as per Survey Monkey program website (The search for... 2014). The survey was intentionally kept short and focused, in order to gain meaningful and easily interpretable results suitable to the scope of this thesis. When designing a survey, it is considerate to respect the survey taker's time, while also keeping in mind that the response rates often remain low. This should be reflected in the survey design.

The survey reliability was ensured by selecting a representative sample of the target audience. The target respondents were mainly representatives of small and medium sized enterprises based in India. The email database of 213 email addresses was provided by Tekes to reach the suitable respondents. In order to reach more respondents, the survey link was additionally shared on appropriate social media channels, mainly on LinkedIn groups that were considered relevant to the survey topic.

The goal of the survey was to collect data on the social media usage of the respondents, and their awareness of Indo-European research and innovation collaboration. This was achieved by distributing the survey only to stakeholders that were known to be appropriate respondents. This increased the survey's validity.

6.3 Survey software

The survey was implemented with Google Forms, a web-based program for online research. Google Forms was chosen as a result of a brief background research of several internet survey tools, including the Survey Monkey program. The advantages of Google Forms over other online survey tools were obvious besides just being free to use. The table below shows the main differences between a popular online survey tool Survey Monkey and a simple, yet feature-rich Google Forms.

TABLE 3. Google Forms vs. Survey Monkey

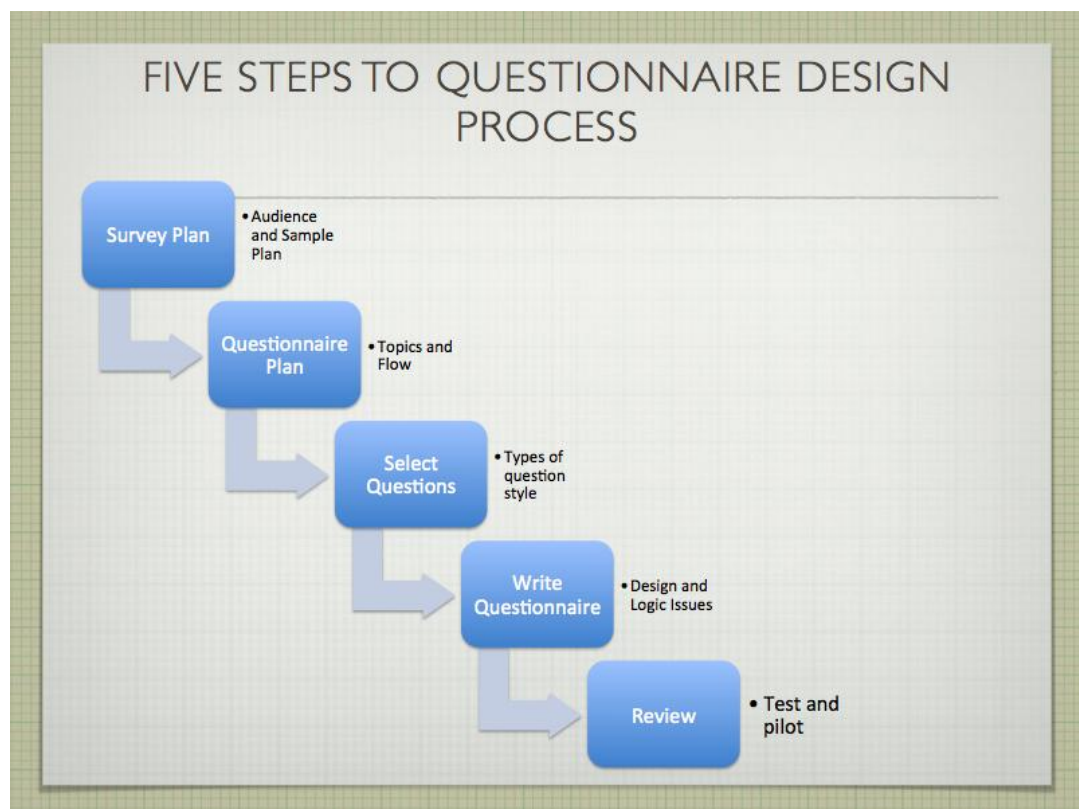
Google Forms	Survey Monkey
Survey accessible anywhere	Accessible only through the website
Free to use	Partly free (paid advanced features)
Logic threading is free	Logic threading only on paid version
Mobile-friendly user interface	Interface not optimized for mobile
Unlimited questions	10 questions per survey on free version
Unlimited responses	Limited number of responses on free version

Google Forms is completely free to use, and it includes features that are only available as paid features in most of the other services. Most importantly, Google Forms comes with an unlimited number of survey questions and responses. It was a significant difference that stood out when comparing the services, as the need for more than ten questions was obvious, and as the number of responses was not possible to predict beforehand. Google Forms has a feature called logic threading, which means that the survey can be adjusted based on the answers the user has given. This is also called skip logic. For instance, if the first question of the survey asks, whether the respondent's organization is currently engaged in Indo-European collaboration, the following questions can be based on that answer accordingly. It is a convenient way to avoid clunky wording of questions and ensure that the survey participants only answer questions relevant to their situation. Google Forms also makes it easy to track the progress of the survey along the way without ever having to log on to an external website. One of the other benefits of Google Forms is that it smoothly integrates with the rest of the Google family services, such as cloud file storage Google Drive. The interface of Google Forms is mobile-friendly, which is highly important especially in India, where many access internet on their cell phones. Usability is always to be addressed, but it becomes a highly important factor especially in online surveying, where response rates often remain

significantly low. Unsmooth user experience gives the user a strong enough reason to skip filling out the survey.

6.4 Survey design

Clear, concise and focused survey design is essential to get results that bring valuable knowledge to be measured and put into use. The survey was named 'Indo-European Research & Innovation on Social Media'. It contained several types of survey response options, including multiple choices, checkbox options, open ended questions with a text field, and ones using the Likert scale. The response type was chosen for each question individually, based on the nature of the question.



PICTURE 4. Survey Design Process (Image source: Surveygoo.com)

Biased questions are common survey design pitfalls and need to be avoided to keep the survey objective. The survey's objectivity was tested to comply with some of the basic usability principles. Clear and straightforward language without using highly technical terms and jargon, logical question order, avoiding double-barreled

questions which means having two questions inside one question, and avoiding leading questions that assume particular patterns of the respondent's behavior or opinions, were all considered while designing the survey.

The survey utilized skip logic in some of the questions. Based on the respondent's answer, the question with skip logic leads the respondent to a specific follow-up question. Using this technique helps to avoid clunky question wording, and minimizes the number of irrelevant questions, thus saving the survey taker's time. This technique was used in situations where respondents were asked about the type of the organization they work for, options being 'for profit', 'non-profit', 'government', and 'educational institution'. Based on the response, the survey would take the person to a page that would pose a question regarding the field or industry the respondent is currently working in. These academic fields and industries were dependent on the organizational type the respondents had chosen in the previous question.

6.4.1 Likert scale

Likert scale is a typical example of a rating scale that allows the respondents to reveal their degree of opinion by asking them to choose one response option over others, arranged in hierarchical order, such as from 'extremely good' to 'not good at all'. An adaptation of Likert scale was used in this survey to find out how often the respondents use the mentioned social networking websites. A scale of five hierarchical response options were offered to measure the regularity of using each of the mentioned websites: 'daily', 'weekly', 'monthly', 'less than once a month', and 'never'. The question could have been considered biased, as it presumed that the respondent is using the mentioned services. However, offering an option to those who never use the mentioned social services, was thought to remove the issue with bias set by the question structure. Usually the Likert scale is used to measure the agreeableness of a given statement, so in this case the scale was used for slightly different purpose, to measure the regularity of social networking site usage.

One important aspect to consider when creating a Likert scale is its polarity. A unipolar scale is considered methodologically more sound, than a bipolar scale, as it is generally easier for people to think about. A unipolar scale might have options ranging from 'extremely good' to 'not good at all', whereas a bipolar scale would offer options from 'extremely good' to 'extremely bad'. Hence, only unipolar scales were used in this survey.

Another aspect worth mentioning is the number of scale points. Five and seven point scales are commonly used. The odd number is recommended, as the scale will then have a midpoint. Scales with more than seven points are often confusing to the respondent, increasing chances of making a random choice, and thus leading to worthless data. Survey Monkey methodologists recommend using five points for a unipolar scale and seven points for a bipolar scale (The Likert scale... 2014).

6.4.2 Multiple choice

Multiple choice response was offered whenever only one answer to a question was required, such as in the cases where alternatives were limited to simply 'yes' and 'no', or in the cases with a higher number of response options, but in which the respondent would only be required to choose one answer over others.

6.4.3 Open-ended questions

Open-ended questions are a good way to get unexpected responses, that might offer insights that were never considered by the survey creator in the first place while designing the survey. While the response fields for open-ended questions in surveys are often left empty, in the best case they can provide lengthy, in-depth information of the given topic. The downside of open-ended questions is that the data might be difficult to analyze as it is not formalized.

6.5 Pre-test

A live usability test and an expert review was arranged before sending out the survey to the group of respondents. The purpose of the test was to evaluate the survey usability and the quality of the content. The test respondents were Adriana Hilde Maria Huisman, PhD in Management Sciences from Radboud University Nijmegen, Netherlands, and Nagendra Singh Rathore, MSc in Business Economics from Maharaja Sayarajao University of Baroda, India. Both were chosen as expert reviewers due to their background in science.

In the controlled test situation, the respondents took the survey under the observation of the survey creator while giving their direct feedback. This setting was helpful for spotting and fixing a number of deficits in the survey. As per the feedback received during the test situation, it was found that the description in the beginning of the questionnaire needed to be read twice to make sense of the meaning due to its clunky wording. The convoluted sentence was then reframed and made more understandable, after which the feedback was positive. The test run revealed major deficits regarding the survey questions. It was suggested that the survey could ask for the city of residence to be able to geographically locate the respondents in India. The survey lacked questions inquiring whether the respondent's organization has any ongoing research and innovation activities. It was obviously of great importance to find out the mentioned deficits; these questions provided vital input of the participating organizations and whether they were relevant to the survey.

Before sending out the survey to all the prospective respondents, it was planned that the survey would be sent to a group of 5-10 random test respondents picked from the client's email database. The purpose of the test run would have been to spot inconsistencies, illogical questions, unexpected question interpretations, and other possible deficits in the survey. This intended test run was however left out due to a limited time frame. It was then decided that the survey would be sent out to all of the audience at once, while observing the received first responses carefully. It would be then still feasible to make changes if some of the questions

seemed to require changes. The lack of the initial test run was not considered harmful as the questionnaire was a brief and simple one.

The survey was tested to properly function on several browsers and devices. Browsers tested were Google Chrome, Mozilla Firefox and Internet Explorer, used by the majority of internet users. It was tested on a laptop computer, desktop computer and a mobile phone with an Android operating system. Despite the preliminary testing, some of the survey takers reported having technical problems. Two users reported not being able to access the survey through the link. This could have been due to a temporary technical glitch or a incompatibility issue with the user's device.

6.6 Dissemination

To get a sufficient amount of responses, a dissemination strategy was created for the survey. The primary means of getting respondents for the survey was using the client's existing email database of 213 email addresses, consisting mainly of representatives of small and medium enterprises based in India. The email along with the link to the survey was sent from the client's email account for added credibility and to get a better response rate.

In addition to the email distribution, selected social media channels were used for sharing the survey. To spread the word of the survey further and to get a more heterogenic mix of respondents, the survey was shared on the professional networking platform LinkedIn's special expertise groups, which were considered to have members who would be suitable respondents for the survey. The themes of these groups revolved around science, business, research, and innovation. Some of the groups were open to all and some required a membership before posting on the group was possible. It was easy to join the groups as it did not require anything else but a press of a button. The post was not published in all of the groups, as some of them required the administrator's approval before entering the group was possible. All of the applications to various groups were not approved, hence it was not possible to post to all of them. Also posting to the groups required group

administrator's approval in some of the groups with restricted access. Hence, if the approval was not granted, the post would not be displayed in that particular group. The survey link was shared in the following groups: 'Business Opportunities Global & India - Collaborate, Partnership, Acquisition and Discussion', Indo-European Business Forum, "HORIZON 2020" Framework Programme for Research & Innovation [Official Group], Spurring Innovation, India Europe Business Club, Open Innovation, Co-creation & Crowdsourcing India, Computer Science Research India, Horizon 2020, Official Framework Programme for Research and Innovation Group, Creative India Forum, and Friends of Indian Innovators.

Additionally, a number of selected India-based entities with connections to SME's were contacted by phone to distribute the survey even further. The contacted entities were FICCI - The Federation of Indian Chambers of Commerce and Industry, CII - The Confederation of Indian Industry, GCCI - Gujarat Chamber of Commerce and Industry, SME World - Small Business Entrepreneurs Online Magazine in India, The Council of EU Chambers of Commerce in India, IECCI - Indo-European Chamber of Commerce and Industry, RIRA - Responsible Investment Research Association, Small and Medium Business Development Chamber of India, India SME Forum, and NEN - National Entrepreneurship Network. It was requested from each entity to share the survey with their contacts by email. Some of the contacted institutes reverted and agreed to share the survey to their respective contacts, but none of them confirmed that the sharing had taken place. Due to the fact that no information on the survey respondents can be tracked, it is not possible to say whether these contacted institutes have in fact shared the survey.

'EU in India' page on Facebook was contacted. The page administrator published the survey on the page which instantly resulted to a slight increase in the number of responses but this spurred a handful of responses from irrelevant respondents based in Europe. The survey was also shared on Inno Indigo programme's website (Indigo Projects 2014). Dr. Cosima Blasy, project manager of Indo-European STI-cooperation at Inno Indigo was keen to share and collaborate as the survey results would directly benefit the Inno Indigo initiative.

7 SURVEY RESULTS

The online survey of 23 questions provided data which can be used as a background to begin planning and implementing a more detailed social media strategy for Indo-European research and innovation activities. It mapped out the basic social media usage statistics among the targeted Indian stakeholders, especially the representatives of small and medium sized enterprises, their present level of awareness of Indo-European R&I activities, and details of their organization, industry and physical location.

The response rate is used to measure a survey's success. It measures the percentage of people who have responded to the survey. Sufficient response rate means that the survey has collected a high enough number of responses, so that the acquired data can be considered to be a reliable representation of the target population. The survey received 53 responses during a period of 11 days, from 1 May 2014 to 11 May 2014. The survey response rate for 'Indo-European research & innovation on social media' is not possible to determine accurately as the exact number of potential respondents is not known. The survey was sent to 213 contacts included in the email database provided by the client. If the response rate was calculated based on these numbers, it would be 25% which could be considered good. However, the survey was additionally disseminated on selected social networking channels. As these channels are publicly accessible, it was not possible to control who is able to answer the survey. The fact that the survey was shared on public platforms will decrease its reliability. However, it should be noted that the survey was shared only on relevant LinkedIn groups and a Facebook page which were evaluated to likely contain members of the target population. The time for the collection of responses was very short due to the tight schedule, but the number of responses can be considered high in relation to the short period of time.

After closing the survey for the purpose of data collection and analysis, the link was left open for more responses. The survey link will be kept active for a period of two months after which it will be closed. The survey data will be then handed over to the client with a higher number of responses. This will not however have

any effect on the data analyzed for the purpose of this thesis, which will remain as it is on May 2014.

7.1 Organization and industry

The survey section mapping the details of the respondent's organization, industry, and the geographical location, consisted of 6-7 questions. The number depended on the respondent's answer to the first question. The first question asked which of the given options best described the respondent's industry. Skip logic was then used to direct the survey taker to the relevant question.

The options given and the response percentages can be seen in the figure below (figure 1).



FIGURE 1. Responses to 'Which of the following best describes the type of organization you work for?' [All respondents]

The figure shows that the majority of the respondents (60%) represented the targeted stakeholder group: for profit organizations and companies. Initially, the survey got responses only from the for profit organizations, as it was sent to an email database consisting of the same. Due to the dissemination strategy that was later implemented to widen the survey reach and to get more heterogenic mix of responses, the survey reached stakeholders from other sectors, which makes the results better represent the diverse group of Indian stakeholders. 13% of the respondents came from non-profit organizations, government bodies were represented by 9%, and educational institutions by 17%.

When asked about their industry, out of the 9 respondents representing 'Educational institution':

- 2 affiliated with research (22%)
- 1 affiliated with education management (11%)
- 1 affiliated with primary/secondary education (11%)
- 5 affiliated with higher education (56%)

When asked about their primary field, out of the 9 respondents representing 'Educational institution':

- 1 affiliated with life sciences (11%)
- 4 affiliated with computer sciences (44%)
- 1 affiliated with business (11%)
- 1 affiliated with education (11%)
- 1 affiliated with systems science (11%)
- 1 indicated 'other' (11%)

Majority of the respondents from educational institutions represented organizations with a total number of over 10,000 employees (33%), counting all locations where the organization operates. 22% worked with organizations of 51-200 employees.

When asked about their job level in the organization, out of the 9 respondents representing 'Educational institution':

- 1 identified as a chairman/trustee (11%)
- 1 identified as a professor (11%)
- 6 identified as a student (67%)
- 1 identified as 'other' (11%)

As per the survey results, it can be interpreted that the majority of the respondents from the category of educational institution were students from large universities. Even if the students were not the main target group of this survey, it is still useful

to receive their responses and views included. Current and future science professionals, the post-graduate students can be seen as an important stakeholder group for the Indo-European research and innovation collaboration due to the India's young population.

When asked about their industry, out of the 32 respondents representing 'For profit' or 'Non-profit' organizations:

- 1 affiliated with agriculture (3%)
- 3 affiliated with corporate services (8%)
- 5 affiliated with education & research (13%)
- 1 affiliated with finance (3%)
- 5 affiliated with high tech (13%)
- 3 affiliated with manufacturing (8%)
- 1 affiliated with media (3%)
- 8 affiliated with medical & health care (21%)
- 3 affiliated with services (8%)
- 3 affiliated with transportation (3%)
- 8 affiliated with 'other' (21%)

Majority of the respondents from for profit and non-profit organizations (28%) chose 'Medical & health care' as their industry. The 'other' option got the same amount and percentage of responses. Interestingly, no specifications were given by any respondent despite the request. It was not possible to make specification required in the used survey software.

Majority of the respondents from for profit and non-profit category represented small organizations with 1-10 employees (28%). The second biggest group of responses came from organizations with 11-50 employees (26%). The targeted small and medium sized enterprises were hence well represented in the survey. Other respondents worked for bigger organizations, and all sizes received responses.

When asked about their job level, out of the 32 respondents representing 'For profit' or 'Non-profit' organizations:

- 20 identified as an owner (51%)
- 3 identified as a vice president (8%)
- 10 identified as a manager (26%)
- 1 identified as a team leader (3%)
- 2 identified as an entry-level employee (5%)
- 1 identified as a student (3%)
- 1 identified as 'other' (5%)

More than a half of the respondents representing the for profit and non-profit organizations were owners (51%). It increases the survey's validity that most of the respondents were holding high positions. They could be trusted to have better knowledge of the company's activities, and would hence be able to answer all of the questions presented in the survey.

When asked about their industry, out of the 5 respondents representing 'Government':

- 1 affiliated with government relations (20%)
- 1 affiliated with law enforcement (20%)
- 3 affiliated with 'other' (60%)

The government category got the least number of responses, which is acceptable as it was not a targeted stakeholder group of this survey. Industry-wise 'Other' category got most responses (60%), but further details were not specified.

Majority of the respondents from government category represented medium sized organizations with 201-500 employees (60%). The second biggest group of responses came from organizations with 1-10 employees (20%) and 5,001-10,000 employees (20%).

When asked about their job level, out of the 5 respondents representing 'Government':

- 2 identified with senior-level (40%)
- 1 identified with middle-level (20%)
- 1 identified with junior-level (20%)
- 1 identified with 'other' (20%)

7.2 Geographical location

The geographical location of the respondents was very wide spread and covered most parts of India, as can be seen on the picture below.



PICTURE 5. Geographical locations of the survey respondents

The survey got responses from the following cities of India in no specific order: Karur, Kharagpur, Kolkata, Bhubaneswar, Hyderabad, New Delhi, Pune, Sangli, Lucknow, Ludhiana, Mumbai, Gurgaon, Goa (the exact location not specified),

Bangalore, Ahmedabad, Chennai, Dibrugarh, Srinagar, Aurangabad, Chandigarh, and Jamshedpur. The metropolitan cities of Mumbai and New Delhi attracted most respondents.

Due to the additional dissemination through social media, the survey reached respondents from outside India. These responses were given from Germany, France, Italy, Austria, USA and Malaysia. The responses received from these areas can be considered irrelevant, and hence decrease the survey's validity. Due to the small percentage of these irrelevant respondents, the results can still be relied upon to give valid data.

7.3 Background in research & innovation

All respondents were asked whether the organization is currently carrying out research and innovation activities. The options given and the response percentages can be seen in the figure below.

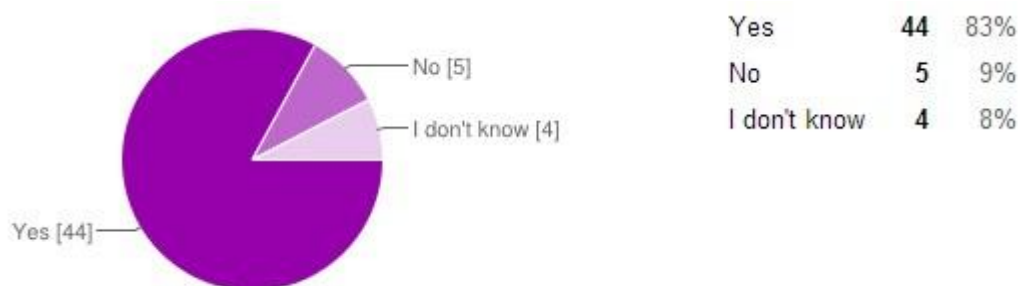


FIGURE 2. Responses to 'Is your organization currently carrying out research & innovation activities?' [All respondents]

83% of the surveyed organizations gave a positive answer to the question. Only 9% of them were not carrying out any R&I activities, and 8% responded not being aware whether the organization is actively pursuing R&I or not. As per these results, the survey successfully reached the right target audience, i.e. organizations that are engaged in research & innovation activities. This in turn increases the

survey's validity, as majority of the survey respondents fall in the intended target group.

The follow-up question collected details based on the previous question. If the respondent answered 'Yes', the survey would ask for more details concerning the current R&I activities. The options given and the response percentages can be seen in the figure below.

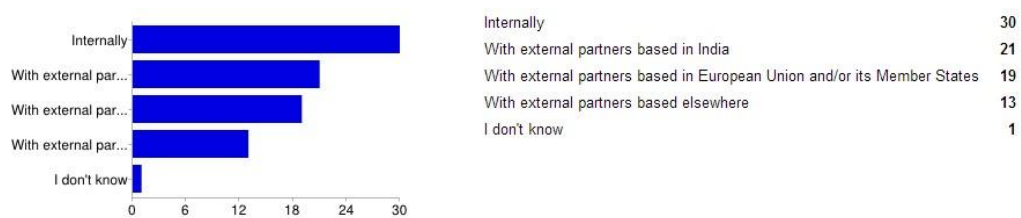


FIGURE 3. Responses to 'How is your organization currently carrying out research & innovation activities?' [Only respondents who answered 'yes' to Q12]

Most of the organizations carrying out activities on research & innovation did it internally inside the organization (68%). 48% of them did it with external partners based in India, 43% with external partners based in European Union and/or its Member States, and 30% with external partners based elsewhere in the world. 'I don't know' was given as an answer by 2% of the respondents. The respondents were able to choose many options in this question, but it is not possible to determine which choices were picked together.

If the respondent's organization was not carrying out any R&I activities, the follow-up question would ask for more details as seen in the figure below.

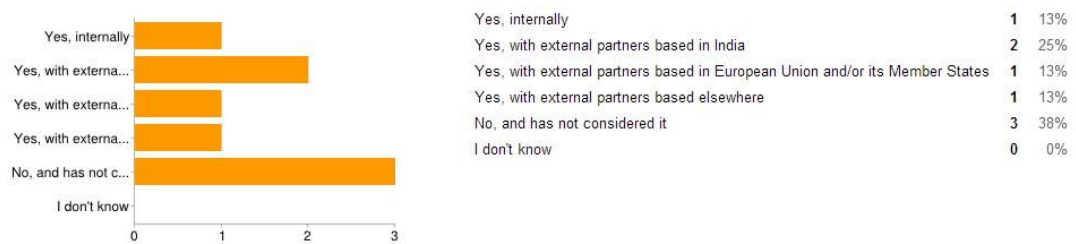


FIGURE 4. Responses to 'Has your organization considered carrying out research & innovation activities in the future?' [Only respondents who answered 'no' to Q12]

Most of the organizations (60%) not taking up R&I had not considered it in the future either. 40% of them had considered it with external partners based in India, 20% with external partners based in European Union and/or its Member States, 20% with external partners based elsewhere in the world, and 20% internally. The respondents were able to choose many options in this question, but it is not possible to determine which choices were picked together by any individual respondent.

This survey section provided valuable data on the organizations' current activities in R&I. As the results show, 83% of all the surveyed organizations are already engaged in R&I activities. Most of them are carrying it out internally. Currently 43% of them partners with project members from European Union and/or its Member States. That 43% is not the target audience of this survey, as the intention was to reach those organizations who are not readily involved in R&I with European partners.

7.4 Awareness of Indo-European research & innovation

All respondents were asked whether they are aware of the opportunity to collaborate with European Union and its Member States in research and innovation. The options given and the response percentages can be seen in the figure below.

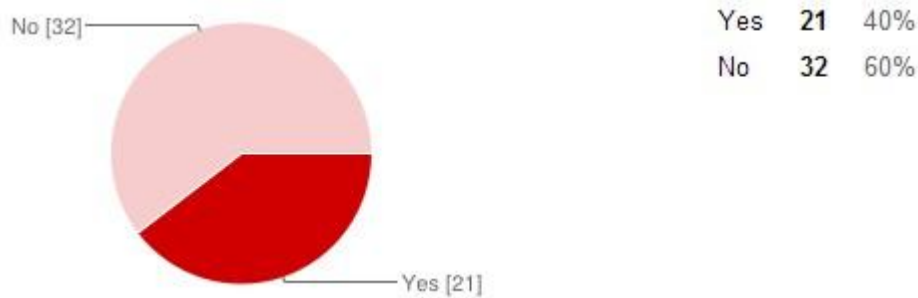


FIGURE 5. Responses to 'Are you aware of the opportunity to collaborate with European Union and its Member States in research & innovation?' [All respondents]

The majority of the respondents (60%) were not aware of the R&I collaboration opportunities with EU and its Member States. This calls for more communication efforts from European stakeholders' side, and finding out reasons for the current lack of awareness.

The respondents were also asked about their awareness of EU research & innovation funding frameworks, which included Inno Indigo, The EU 7th Framework Programme for Research (FP7), and Horizon 2020. The options given and the absolute number of responses can be seen in the figure below.

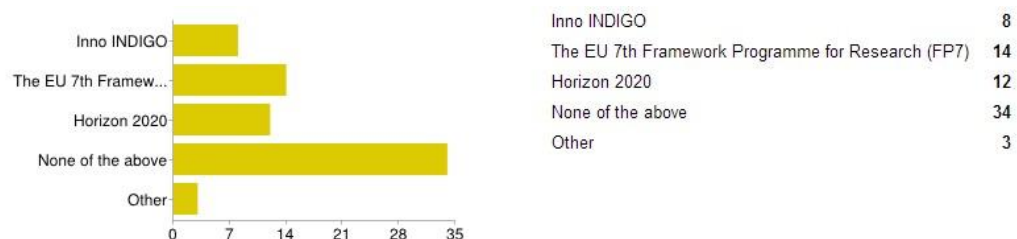


FIGURE 6. Responses to 'Which of the following EU research & innovation initiatives have you heard of?' [All respondents]

Over a half of the respondents (64%) indicated not having heard of any of the mentioned EU initiatives in research and innovation. The EU 7th Framework Programme for Research (FP7) was the most known among the three funding frameworks. It was recognized by 26% of the respondents. This is assumingly due

to the fact that the initiative has been active since several years. Inno Indigo and Horizon 2020 are newer initiatives, which is reflected in the results. Inno Indigo was known by 15%, and Horizon 2020 by 23% of the respondents. 6% indicated having heard of other EU R&I frameworks, which however were left unnamed.

Information related to Indo-European research & innovation can be found from both online and offline, but how many actually have come across these communication efforts? To better understand the current status of the information flow, the respondents were asked about the sources where they had seen information related to Indo-European R&I collaboration. The options given and the absolute number of responses can be seen in the figure below.



FIGURE 7. Responses to 'Where have you seen information related to Indo-European research & innovation?' [All respondents]

42% of all respondents indicated having seeing such information on social networking websites. The second most popular response (32%) indicated that the respondent had not come across such information anywhere. 21% were familiar with the EU's on-ground events. Other responses included newspapers (8%), scientific journals (4%), other websites (17%), email newsletter (23%), and other (2%). This could be interpreted as a need to emphasize the importance of the social networking platforms.

The following question surveyed the convenience of finding information, and inquired the respondents how easy is it to find information on Indo-European research & innovation activities online.

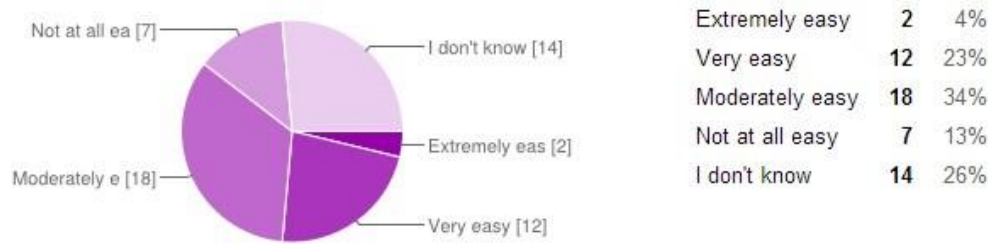


FIGURE 8. Responses to 'If you search information ONLINE about Indo-European research & innovation, how easy is it to find what you need?' [All respondents]

Most of the respondents (34%) find it moderately easy to find information on the Indo-European R&I. The significant percentage (26%) of respondents do not know how easy is it to find such information. It indicates that these respondents have never looked for such information, which correlates with the fact that most of the survey respondents were not aware of such opportunities.

7.5 Social media usage

Each and every respondent indicated having an account on social media. The absolute number of responses and the choice options are given in the below figure.

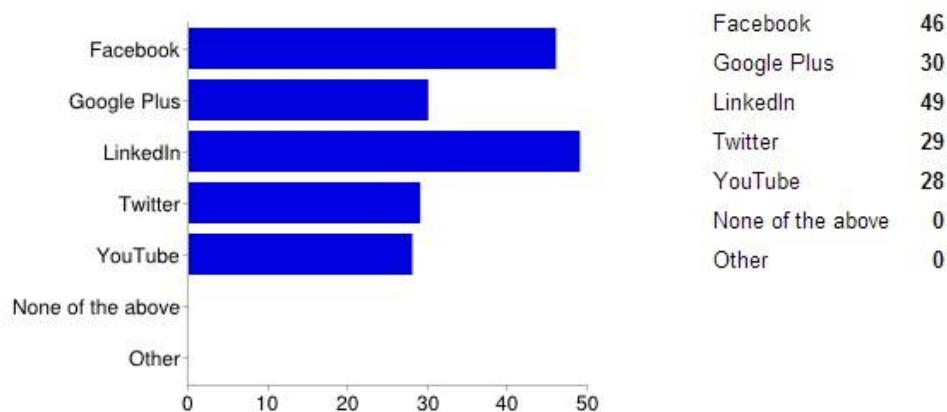


FIGURE 9. Responses to 'Which of the following social networking websites have you registered an account with?' [All respondents]

The professional networking platform LinkedIn was the most popular platform among the respondents while 92% of all respondents indicated using it. It was slightly more popular than Facebook (87%). It is worthy to notice that none of the respondents chose the option 'None of the above', so every respondent is present on some social media platform. Twitter was used by 55%, Google Plus by 57%, and YouTube by 53% of the respondents.

Additional social networking websites the survey takers mentioned using were Wayn (portal for travelers), Orkut (used to be the most popular social networking service in India before Facebook), XING, Google, Viadeo (US-based professional networking platform), WhatsApp (mobile messaging application), ResearchGate (professional networking service for researchers), Quora (social network based on asking and answering questions), and Viber (online calling service).

To be able to better meet the requirements of the stakeholders online, it was necessary to understand the kind of technology they use to access the social networking websites. The response choices and numbers are shown in the figure below.

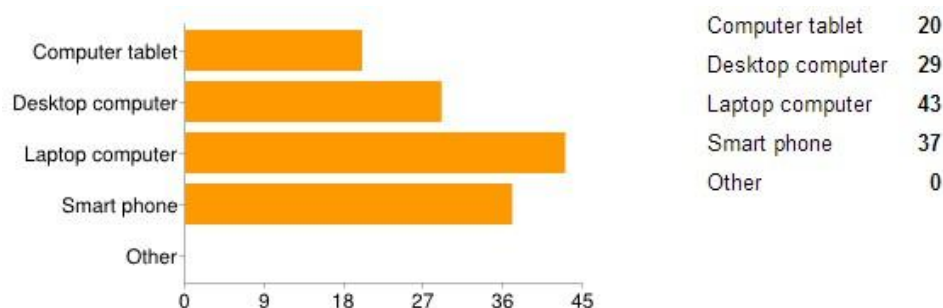


FIGURE 10. Responses to 'Which of the following devices do you use to access your social networking accounts?' [All respondents]

The most popular device used to connect to social networking accounts was a laptop computer, which 81% of the respondents indicated using. Smart phone was the second most popular option (70%), followed by a desktop computer (55%), and a computer tablet (38%). It is important to pay attention to the fact that 70% of the respondents access their social media accounts on their smart phone. This sets

certain requirements for the content design, as the content will be displayed differently on a smart phone screen compared to e.g. laptop screen.

The following section in the survey intended to find out how often the respondents are active on their social media accounts. The results for each platform (Facebook, Google Plus, LinkedIn, Twitter, YouTube) can be seen in the figures below.

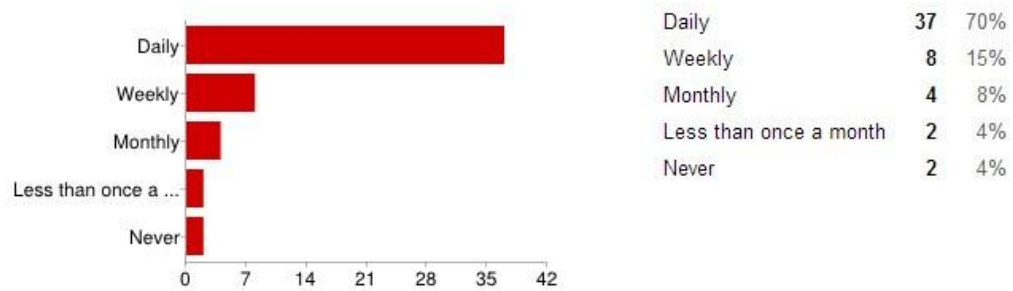


FIGURE 11. Responses to 'How often do you use the following social networking websites [Facebook]?' [All respondents]

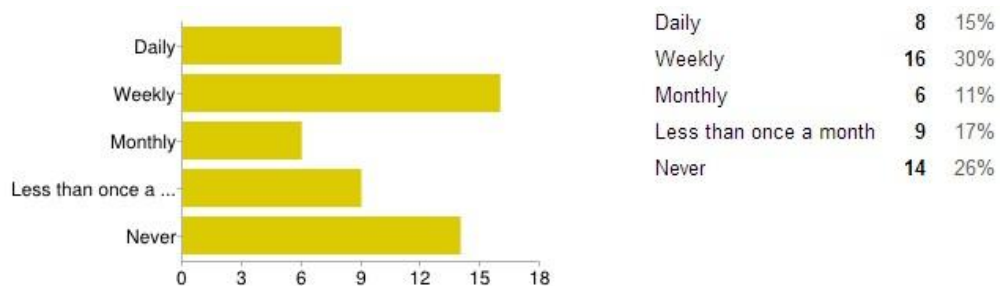


FIGURE 12. Responses to 'How often do you use the following social networking websites [Google Plus]?' [All respondents]

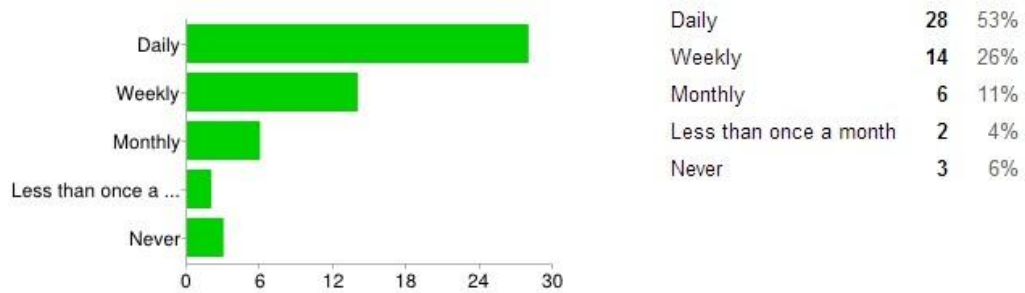


FIGURE 13. Responses to 'How often do you use the following social networking websites [LinkedIn]?' [All respondents]

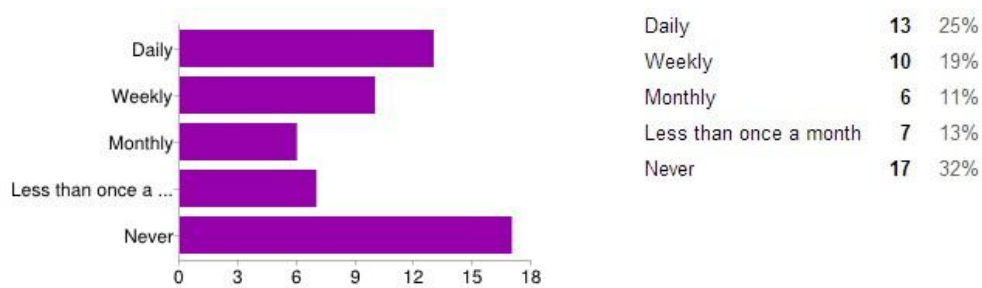


FIGURE 14. Responses to 'How often do you use the following social networking websites [Twitter]?' [All respondents]

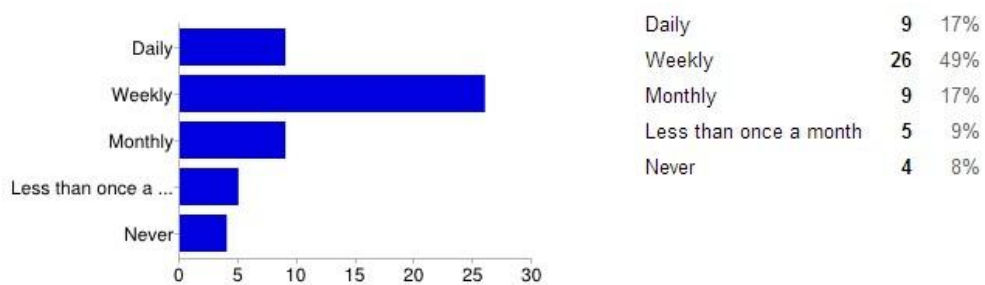


FIGURE 15. Responses to 'How often do you use the following social networking websites [YouTube]?' [All respondents]

The respondents were most active on Facebook. 70% of the respondents indicated using it on a daily basis. LinkedIn was the second most popular platform with 53% of the respondents using it every day. The usage of Google Plus was the most divided. 30% said they use it weekly, and almost same amount, 26%, claimed

never using it. Micro-blogging platform Twitter was the least popular with 32% saying they never use it. However, 25% of the respondents indicated using it daily.

The regularity of reading professional online blogs was asked from the survey takers in a separate question. The results can be seen in the figure below.



FIGURE 16. Responses to 'How often do you read professional blogs?' [All respondents]

Professional blogs are being read by 40% of the respondents on a weekly basis. 34% said reading them on a daily basis.

The following question presented the respondents various types of information concerning topics around research & innovation, and asked how useful would it be for them to be able to access it via social networking websites. Information on calls for proposal, completed projects, project partners, research papers, industry news and events were mentioned as options. The results clearly indicate that the respondents find it overall useful to have access to such information through social networking websites. The responses and percentages were as follows in the figures below.

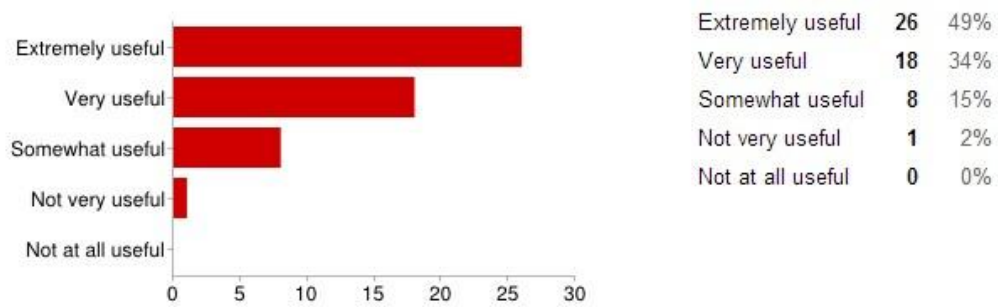


FIGURE 17. Responses to 'Considering research & innovation, how useful would it be for you to have access to following information through social networking websites [Information on calls for proposal]?' [All respondents]

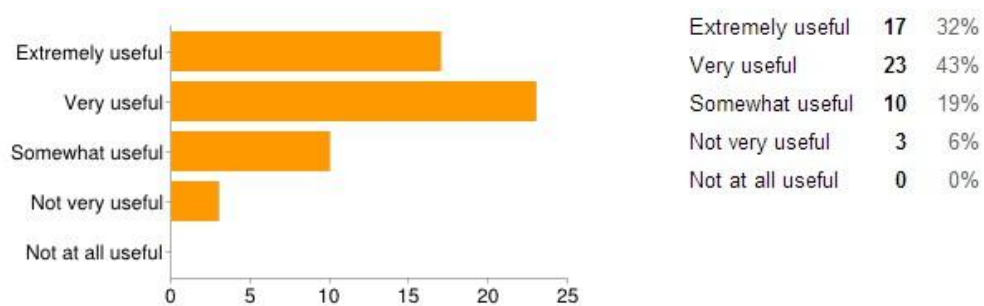


FIGURE 18. Responses to 'Considering research & innovation, how useful would it be for you to have access to following information through social networking websites [Industry events]?' [All respondents]

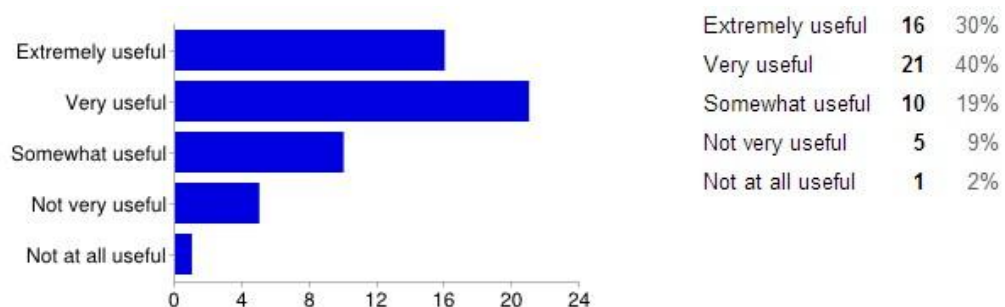


FIGURE 19. Responses to 'Considering research & innovation, how useful would it be for you to have access to following information through social networking websites [Industry news]?' [All respondents]

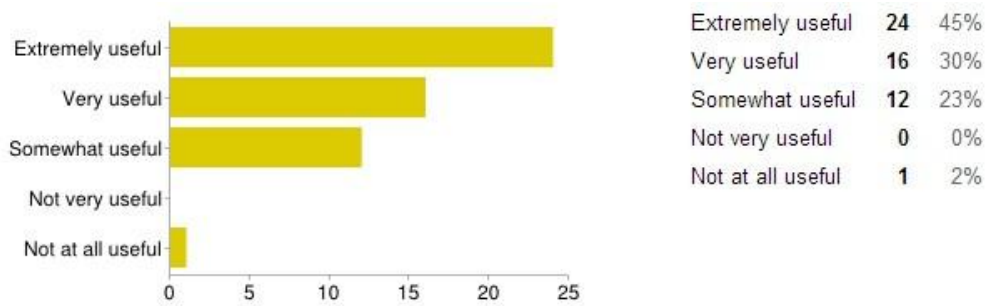


FIGURE 20. Responses to 'Considering research & innovation, how useful would it be for you to have access to following information through social networking websites [Research papers]?' [All respondents]

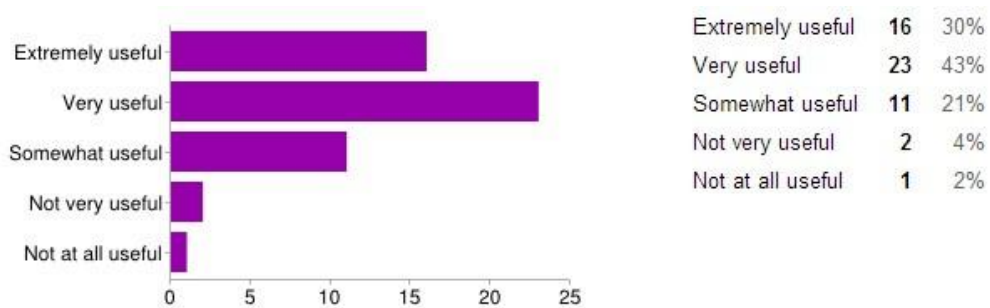


FIGURE 21. Responses to 'Considering research & innovation, how useful would it be for you to have access to following information through social networking websites [Project partners]?' [All respondents]

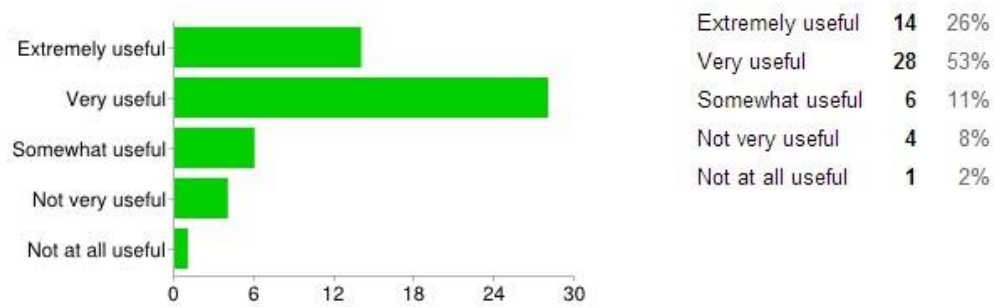


FIGURE 22. Responses to 'Considering research & innovation, how useful would it be for you to have access to following information through social networking websites [Completed projects]?' [All respondents]

The following question presented the respondents various types of online activities concerning research & innovation, and asked how likely they would commit to these activities on social networking websites. Searching information on calls for proposal, funding opportunities and research papers, participating in professional discussions, looking for research partners, reading about industry news and events, keeping in touch with colleagues, and professional networking were mentioned as options. The results clearly indicate that the respondents find it overall useful to have access to such information through social networking websites. The responses and percentages were as follows in the figures below.

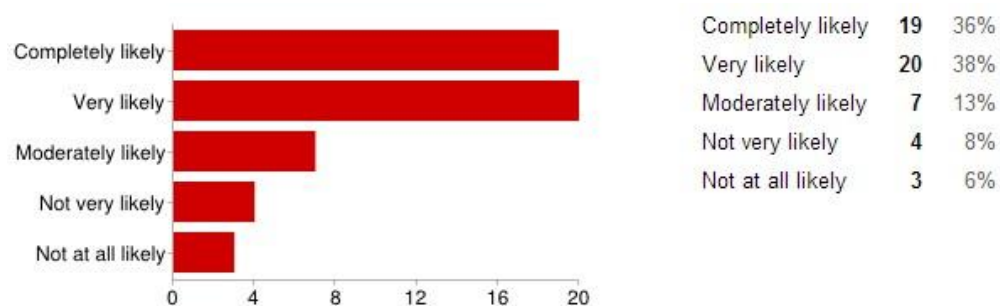


FIGURE 23. Responses to 'Considering research & innovation, how likely would you do the following activities on social networking websites [Search information on calls for proposal]?' [All respondents]

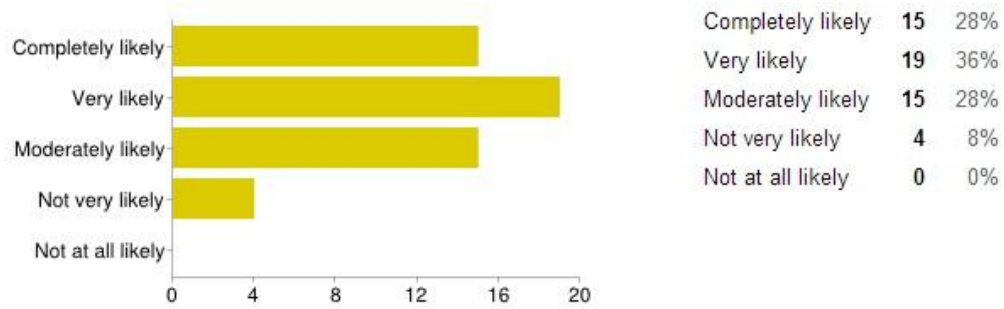


FIGURE 24. Responses to 'Considering research & innovation, how likely would you do the following activities on social networking websites [Participate in professional discussions]?' [All respondents]

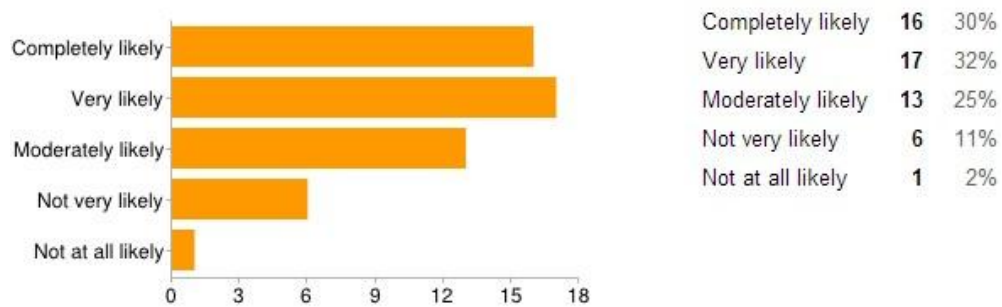


FIGURE 25. Responses to 'Considering research & innovation, how likely would you do the following activities on social networking websites [Search funding opportunities]?' [All respondents]

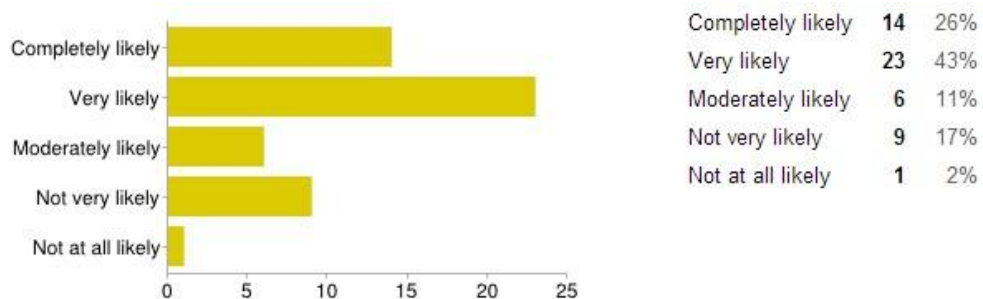


FIGURE 26. Responses to 'Considering research & innovation, how likely would you do the following activities on social networking websites [Read about industry events]?' [All respondents]

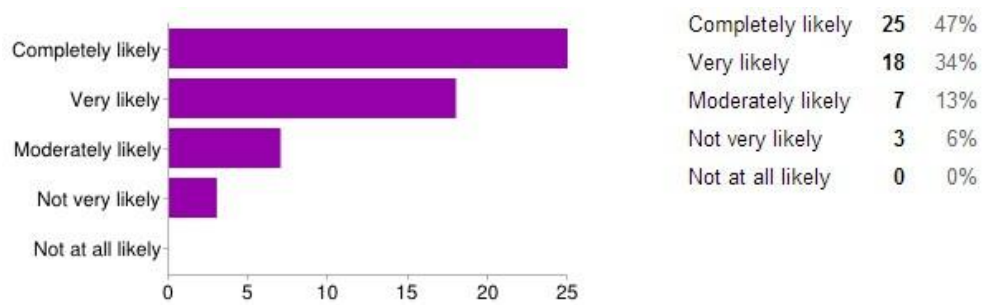


FIGURE 27. Responses to 'Considering research & innovation, how likely would you do the following activities on social networking websites [Keeping in touch with colleagues]?' [All respondents]

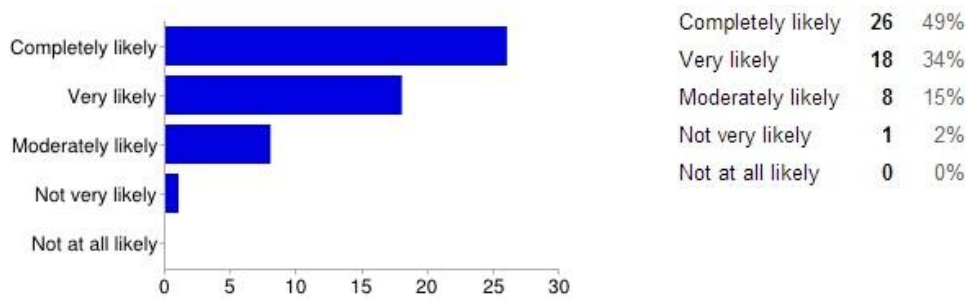


FIGURE 28. Responses to 'Considering research & innovation, how likely would you do the following activities on social networking websites [Professional networking]?' [All respondents]

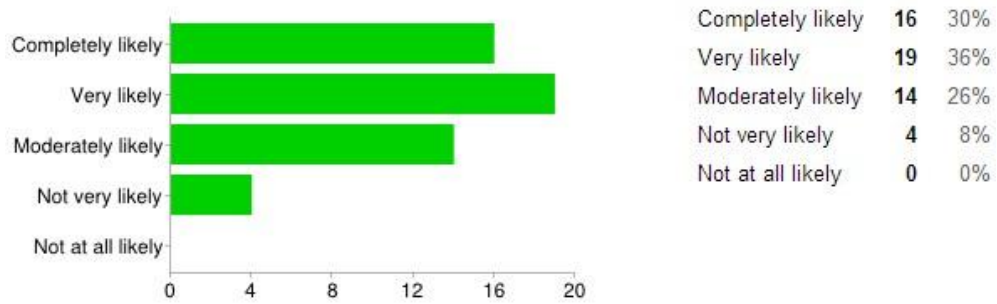


FIGURE 29. Responses to 'Considering research & innovation, how likely would you do the following activities on social networking websites [Look for research partners]'? [All respondents]

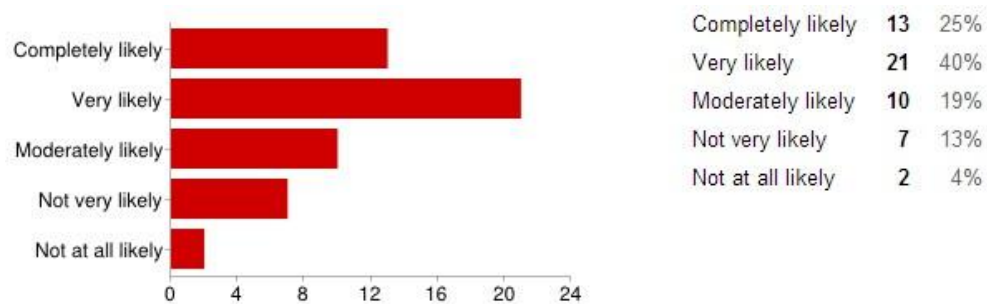


FIGURE 30. Responses to 'Considering research & innovation, how likely would you do the following activities on social networking websites [Search research papers]'? [All respondents]

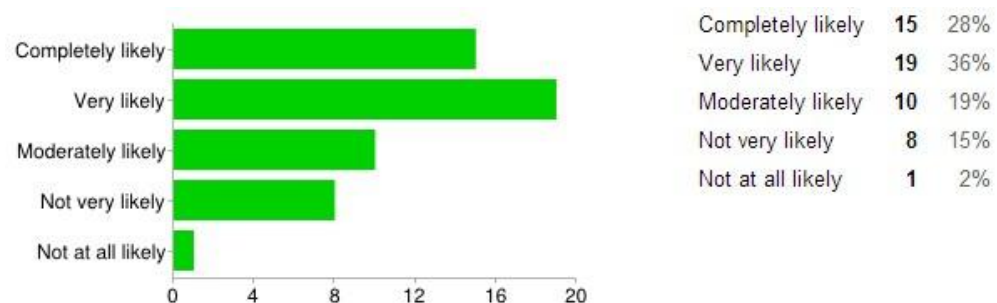


FIGURE 31. Responses to 'Considering research & innovation, how likely would you do the following activities on social networking websites [Read industry news]'? [All respondents]

The last section of the close-ended questions measured the suitability of various social media platforms for sharing information about Indo-European research & innovation. LinkedIn was the most popular choice with 49% of the respondents saying that it would suit the purpose extremely well. As per the respondents, Google Plus was seen to suit this purpose only moderately well by the majority. This correlates with the data received regarding the usage of this platform. Even the video sharing platform YouTube was seen to suit this kind of information dissemination very well by the majority. Twitter had the most division in the results wherein the opinions fluctuated evenly from 'not very well' to 'extremely well'. The responses and percentages were as follows in the figures below.

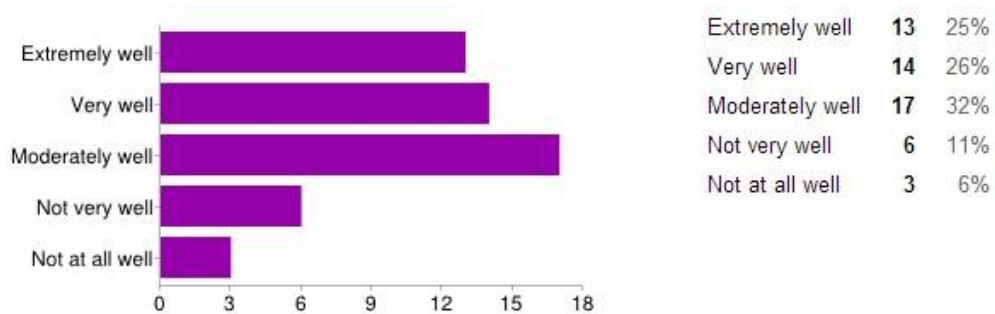


FIGURE 32. Responses to 'How well do you think these social networking platforms suit the purpose of sharing information about Indo-European research & innovation [Facebook]'? [All respondents]

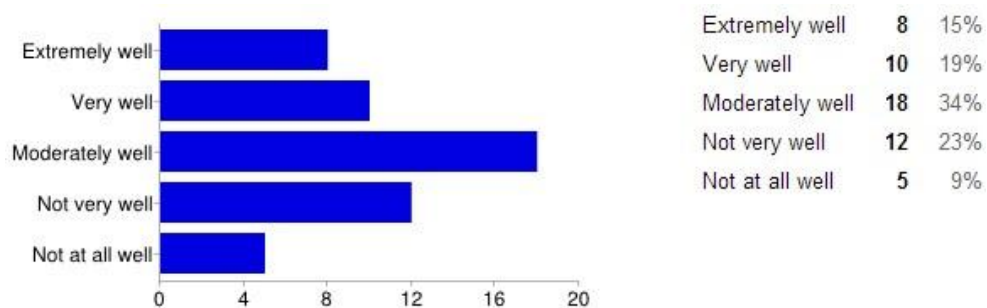


FIGURE 33. Responses to 'How well do you think these social networking platforms suit the purpose of sharing information about Indo-European research & innovation [Google Plus]'? [All respondents]

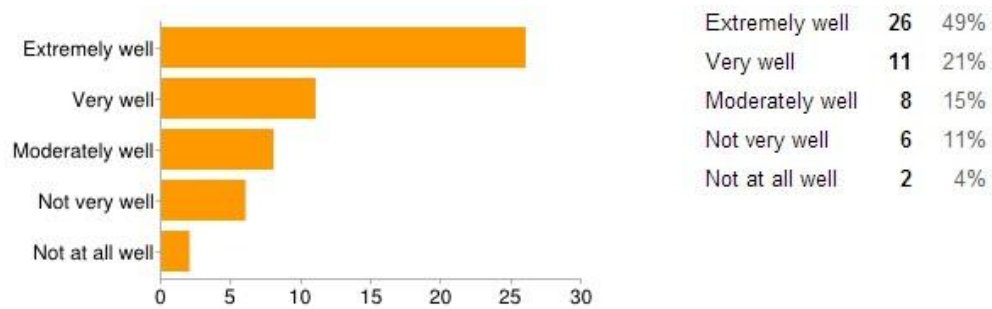


FIGURE 34. Responses to 'How well do you think these social networking platforms suit the purpose of sharing information about Indo-European research & innovation [LinkedIn]'? [All respondents]

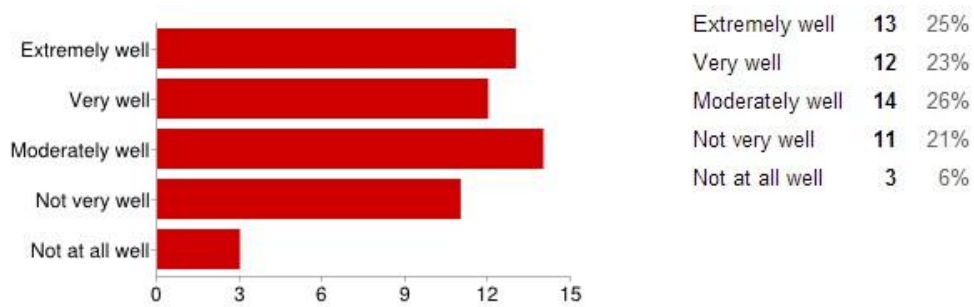


FIGURE 35. Responses to 'How well do you think these social networking platforms suit the purpose of sharing information about Indo-European research & innovation [Twitter]'? [All respondents]

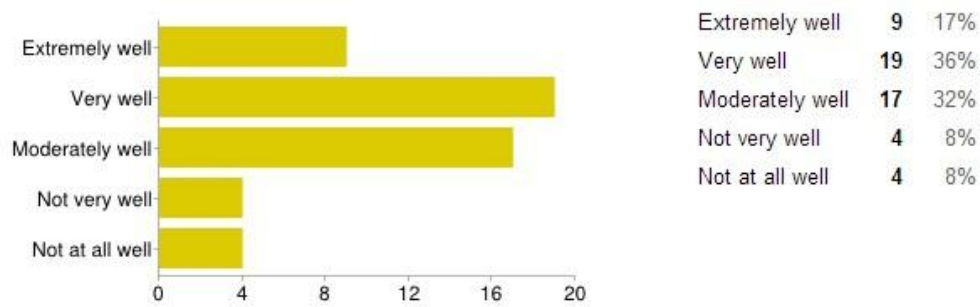


FIGURE 36. Responses to 'How well do you think these social networking platforms suit the purpose of sharing information about Indo-European research & innovation [YouTube]'? [All respondents]

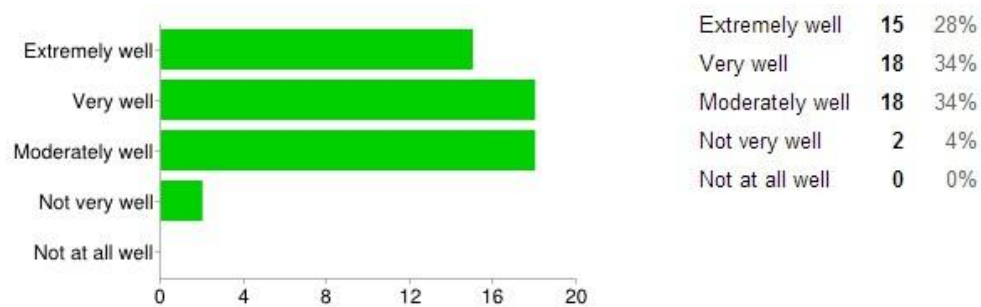


FIGURE 37. Responses to 'How well do you think these social networking platforms suit the purpose of sharing information about Indo-European research & innovation [Blogs]'? [All respondents]

7.6 Effects of social media on research & innovation

The last two questions of the survey were open-ended questions with an unlimited text field, where the respondents could freely write their thoughts. A significant number of lengthy responses was received. The respondents obviously were keen to share their opinions, which displays their interest in the matter. Social networking platforms are identified as a potentially powerful connector between the members of the science communities around the world. They are seen to enable wider set of opportunities for networking, finding research partners, finding new and interesting information, giving and receiving feedback, all on a global level

sans restrictions of country borders, bureaucracy, or other limiting factors. Also it is suggested that research & innovation activities can be brought closer to the general public through means of social media. Examples of the received responses can be seen in the table below (table 4).

In your opinion, what kind of effects will social media have on research & innovation?
It will make the opportunities and knowledge more accessible
I guess professional networking sites (eg. LinkedIn) is a more effective platform for promoting information on research and innovation. This is primarily because the pattern of information search, retrieval and consumption by users on a professional networking platform is more likely to be oriented towards such needs vis-a-vis their behaviour while using purely social networking sites like Facebook.
I think it plays a very important role but it needs to be monitored on day to day basis
It would bring closeness towards a better partnership
it can foster discussion and information dissemination. we have done several such campaigns for Denmark and Finland and would be happy to share.
It can bring together stakeholders and motivate innovators
Through Social media interested people can know about other peoples research. There are people who seek opportunity to participate in these field, people who don't know where to begin, for people like me it will be helpful.
It might work well since today everything has changed to social media
The dissemination of information can be fast so groups in different locations or countries can collaborate.
speed of sharing and ubiquitous networking
Social media would bring research and innovation to a broader audience and lead to encouragement of the same in the youth at a larger scale
There would be lot more positive feedback and action.
in my opinion only linkedin, reserchgate and cietulike are useful

TABLE 4. Examples of responses to 'In your opinion, what kind of effects will social media have on research and innovation?'

7.7 Comments, questions, concerns

The last field of the survey let the respondents freely give any feedback, ask questions or address their concerns (table 5). The concerns touched upon the easy accessibility of information produced by researchers, and if this data would go into wrong hands causing harm in the end. Also the researchers' lack of will to share such information was addressed. One of the respondents assumed that Horizon 2020 framework does not provide opportunities for Indians. This is incorrect, as Indians can still be included in the collaborative research projects where their input is deemed essential by the Commission (Nordic Centre India 2014). Misinformation like this can be tackled with more effective communication. Some of the respondents were keen to find collaborators and were asking for them, while describing their projects.

Do you have any other comments, questions, or concerns?
Do i get genuine business leads ?
People may not be willing to share enough technical details about their projects on social media.
Wouldn't bringing research and innovation to social media pose a threat to the society of the wrong people getting so much of valuable information and maybe better technical ideas for use After all technology has been greatly used and misused in the recent past
Yes, earlier there were programs like ASIA Pro Eco or TIPOT where India can participate. In HORIZON 2020, there is no such opportunity. I strongly believe that India should be included in this program.
It's a good idea worth trying but the expectation have to be limited and lot of promotions may be needed.
also, building case studies and uploading them on slideshare is a good idea.
I am not able to linkup with those, with whom I can have collaboration particularly in the area of Medical Electronics, Agro processing using RF technologies
We believe research and innovation initiatives/projects must yield/result in tangible benefits at the end of the day. We have plans to make available e-governance software free of cost and even place the whole technology developed through R & D spanning over 15 years in the open source domain. While we have completed the core technology, we would still need to fortify it and optimise it with the help of experts, Is there a way to find EU partners in this venture?

TABLE 5. Examples of responses to 'Do you have any other comments, questions, or concerns?'

8 CONCLUSIONS AND SUGGESTIONS

The future of social media looks bright in the eyes of Indian organizations surveyed for the Ernst & Young India's report (2013). Majority of them were very optimistic about the usage of social networking sites to reach their respective audiences. Community building was the main organizational advantage that successful use of social media was said to bring (Ernst & Young 2013). For European Union's research & innovation initiatives as well as local funding agencies in the Member States, who wish to promote themselves and increase awareness of Indo-European collaboration, a successful communication strategy is crucial. An active presence on online social platforms is rather the norm than the exception for any type of organization.

This study provided insights of this audience, their digital whereabouts and requirements for the content. It is suggested to put in place a thorough social media strategy that addresses the needs of the stakeholders and considers the channels which they use.

Each and every respondent of the survey indicated using social media services. None of them indicated not using any of the services. This translates to the fact that the target stakeholders of Indo-European research & innovation initiatives are trying to reach in India, are present on social networks, especially on Facebook and LinkedIn which were the most actively used platforms. This calls for a due social media implementation as a part of the communication strategy, to maximize the reach and grow the potential of Indo-European research & innovation initiatives.

This study aimed to support the understanding on which of the existing social platforms can be utilized and what kind of content should be produced. It is important to notice that the tools of social media are ever-changing. Something that is popular worldwide today, might disappear tomorrow and be replaced with another similar or a whole new service. Hence a successful communication strategy reflects this natural change of tools that characterizes social media.

Engaging content attracts more interaction, which calls for designated professionals producing relevant content that considers the requirements of the targeted stakeholders. Calls for proposal, research papers, searching project partners, information on partners and completed projects, industry news and events all were the type of data the survey respondents found extremely useful or very useful to be accessible via social networking websites. The engagement with the content posted on social media should be measured on a regular basis to understand the user habits better, and thus manage to maintain a successful presence that gives back to the organization. This knowledge can then be transformed into an intelligence for a detailed social media content plan that covers the stakeholder requirements. The study of the current presence of the Delegation of European Union to India indicated a lack of responsiveness on the social media channels as per the current activity. These type of issues need to be addressed, so that the visitors of these channels feel like members of a community, wishing to return and interact more.

The survey provided valuable insights, but it is recommended to continue the study with an improved survey that goes more into details. The next survey could include a comparison between countries to compare the attractiveness and awareness of Europe and e.g. US as destinations for research & innovation collaboration. This would give depth and perspective to the results as they could be then directly compared to another entity's performance. It would also be recommended to add a question about how do the stakeholders prefer to search information on R&I opportunities. This should include communication channels outside social media as well, such as Google, email newsletters, seminars, and magazines & newspapers. This way the chance for preference to traditional means of communication can be removed, which would in turn increase the survey's validity providing more accurate and less biased information.

In order to attract more potential collaborators in India to take part in Indo-European projects, whether SME's or educational institutes, it is evident that information needs to be easily searchable and available. An ongoing dialogue should be fostered between these diverse communities, and what better place to do it than where the people are - online. Improving the methods of open digital communication will not only help reach the main target audience, but also has the

potential to bring science closer to the general public, policy-makers, and funders, hence increasing the overall attention and interest.

Research, development, and innovation are vital activities to societies wishing to remain competitive. Europe needs an economical boost in the near future. The potential impact of social media's role in the picture could easily be dismissed by some, but as the study shows, it is perceived as a preferred platform for activities around research & innovation. The successful implementation demands awareness of its possibilities and restrictions. European Union and its Member States can increase the attractiveness of the area as a whole by actively engaging and promoting its activities and guiding the existing academics to be the ambassadors of their respective institutions on social media. Social media should be incorporated into the communication strategies and bravely explore the new avenues.

REFERENCES

REPORTS

Council of the European Union. 2005. The India-EU Strategic Partnership Joint Action Plan. Read 6.2.2014.

http://ec.europa.eu/enterprise/policies/international/files/eu_india_joint_action_plan_en.pdf

Ernst & Young. 2013. Social media marketing: India trends study. Read 26.1.2014.

<http://www.ey.com/IN/en/Services/Advisory/Social-Media-Marketing-India-Trends-Study-2013>

European Commission. 2012. Review of the S&T cooperation Agreement between the European Union and the Government of the Republic of India 2007-2011. Read 3.2.2014. <http://ec.europa.eu/research/iscp/index.cfm?pg=publications>

European Union. 2013. Innovation Union - A pocket Guide on a Europe 2020 initiative. <http://bookshop.europa.eu/en/innovation-union-pbKI3213062/>

Ministry of Employment and the Economy. 2012. Evaluation of Tekes. Read 5.2.2014. http://www.tem.fi/files/33176/TEMjul_22_2012_web.pdf

The Evaluation Partnership. 2010. A Study of European Researchers working in and collaborating with India. Read 14.4.2014.

http://eeas.europa.eu/delegations/india/documents/eu_india/023_03_final_report_en.pdf

WEB ARTICLES

Bloomberg Businessweek. 2012. The Future of Facebook Is in India. Read 7.5.2014. <http://www.businessweek.com/articles/2012-05-31/the-future-of-facebook-is-in-india>

Cave, K. IDG Connect. 2014. How do Indians use social media? Read 10.5.2014. <http://www.idgconnect.com/abstract/4330/how-indians-use-social-media>

CNN. 2014. Politicians slug it out in India's first social media election. Read 12.4.2014. <http://edition.cnn.com/2014/04/09/world/asia/indias-first-social-media-election/>

Digital Diplomacy. 2014. Interview: David Tunney, Head of Social Media for the EEAS: "Traditional diplomacy is being transformed by social media and online communication". Read 5.4.2014. <http://digitaldiplomacy.ro/interview-with-david-tunney-on-the-role-of-social-media-for-the-european-diplomacy/?lang=en>

Economic Social and Research Council. 2014. Impact Toolkit: Social Media. Read 1.5.2014. <http://www.esrc.ac.uk/funding-and-guidance/impact-toolkit/>

Firstbiz. 2014. Twitter's India plan: New offices in Mumbai, hiring from Google, FB. Read 21.3.2014. <http://www.firstbiz.com/corporate/twitters-india-plan-new-offices-in-mumbai-hiring-from-google-fb-48897.html>

Friedman, H; Amoo T. 1999. Rating the rating scales. Read 21.3.2014. <http://academic.brooklyn.cuny.edu/economic/friedman/rateratingscales.htm>

Hindu Business Line. 2013. Social media: GenY the top user. Read 20.2.2014. <http://www.thehindubusinessline.com/industry-and-economy/info-tech/social-media-geny-the-top-user/article4501177.ece>

Hindu Business Line. 2014. Twitter has high flying plans for India. Read 20.2.2014. <http://www.thehindubusinessline.com/industry-and-economy/info-tech/twitter-has-high-flying-plans-for-india/article5594082.ece>

Indigo Projects. 2014. Read 21.5.2014. The role of social media in Indo-European cooperation - What's your say? <http://indigoprojects.eu/object/news/42>

JISC. 2010. Digital apps for researchers. Read 3.5.2014. <http://www.jisc.ac.uk/publications/jiscinform/2010/inform27.aspx#digiapps>

JISC. 2010. Value of open access. Read 3.5.2014. <http://www.jisc.ac.uk/publications/jiscinform/2010/inform27.aspx#valueofopenaccess>

Knoepfler, P. 2011. My year as a stem-cell blogger. Read 20.4.2014. <http://www.nature.com/news/2011/110727/full/475425a.html>

Mashable. 2014. Social networking service. Read 20.2.2014. <http://mashable.com/category/social-networking/>

Nordic Centre India. 2014. EU funding for India-related research under Horizon 2020. Read 15.5.2014. <http://www.nordiccentreindia.com/news/92-eu-funding-for-india-related-research-under-horizon-2020>

Priego, E. 2011. How Twitter will revolutionise academic research and teaching. Read 23.3.2014. <http://www.theguardian.com/higher-education-network/blog/2011/sep/12/twitter-revolutionise-academia-research>

ResearchGate. 2012. Two Million Members, Two Million Stories. Read 8.5.2014 <https://news.researchgate.net/>

Research Innovation Network. 2011. Social media: A guide for researchers. Read 8.2.2014. http://www.rin.ac.uk/system/files/attachments/social_media_guide_for_screen_0.pdf

Social Bakers. 2014. Statistics: India. Read 8.5.2014. <http://www.socialbakers.com/facebook-statistics/india>

Survey Monkey. 2014. The Likert scale explained. Read 1.5.2014.
<https://www.surveymonkey.com/mp/likert-scale/>

Survey Monkey. 2014. The search for the right sample questions. Read 20.4.2014.
<https://www.surveymonkey.com/mp/certified-survey-questions/>

The Economist. 2014. Professor Facebook. Read 5.5.2014.
<http://www.economist.com/>

The London School of Economics. 2011. LSE produces new Twitter guide for academics. 2011. Read 23.3.2014.
http://www.lse.ac.uk/newsAndMedia/news/archives/2011/10/twitter_guide.aspx

The London School of Economics. 2011. Using Twitter in university research, teaching and impact activities. Read 23.4.2014
http://blogs.lse.ac.uk/impactofsocialsciences/files/2011/11/Published-Twitter_Guide_Sept_2011.pdf

Times of India. 2014. Facebook crosses 100 million user mark in India. Read 10.4.2014. <http://timesofindia.indiatimes.com/tech/social/Facebook-crosses-100-million-user-mark-in-India/articleshow/33447989.cms>

Times of India. 2014. How WhatsApp buyout will help Facebook in India. Read 6.5.2014. <http://timesofindia.indiatimes.com/tech/tech-news/>

Wikipedia. 2014. Social Media. Read 17.3.2014.
http://en.wikipedia.org/wiki/Social_media

SOCIAL MEDIA ACCOUNTS

EU in India on Facebook. 2014. <https://www.facebook.com/EUinIndia?fref=ts>

EU in India on Twitter. 2014. https://twitter.com/EU_in_India

UK in India on Facebook. 2014. <https://www.facebook.com/bhcindia>

British High Commission New Delhi on Twitter. 2014.
<https://twitter.com/UKinIndia>

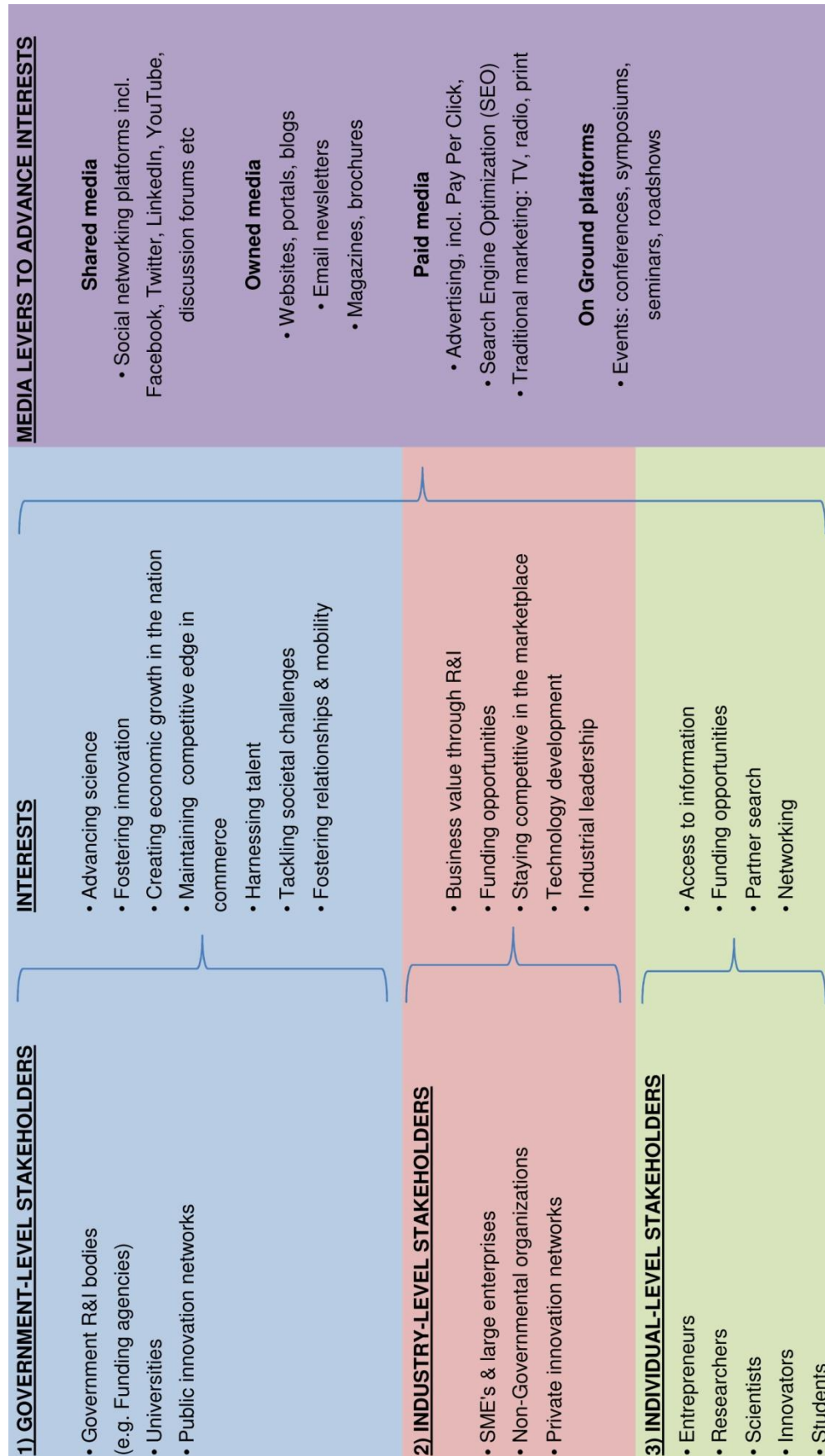
INTERVIEWS

Dambois, D. Head of Innovation & Research at Delegation of EU to India. 2014. Interview 3.3.2014. Interviewer Peltola, J. Transcribed.

EMAILS

Svtil, P. Minister Counsellor Deputy Head of Delegation at Delegation of EU to India. 2014. Social media: EU Research & Innovation in India. Email message. johanna.peltola@gmail.com. Read 30.4.2014.

APPENDIX 1. Stakeholder Framework



APPENDIX 2. Survey form: Indo-European research & innovation

1 (11)

5/13/2014

SURVEY: Indo-European Research & Innovation - Google Forms

Indo-European Research & Innovation on Social Media

Support Indo-European research & innovation by filling out this short 5-minute survey. Your views are highly valuable in improving the digital communication strategy to enhance the Indo-European collaboration.

Your input will be kept strictly confidential. The results will be used in the final thesis conducted in Tampere University of Applied Sciences in collaboration with Tekes, the Finnish Funding Agency for Technology and Innovation. Your input to open ended questions might be cited in the final work.

With great thanks,
Johanna Peltola
Tampere University of Applied Sciences

*Required

Tell us about you and your organization

1. Which of the following best describes the type of organization you work for? *

Mark only one oval.

- For profit Skip to question 8.
- Non-profit Skip to question 8.
- Government Skip to question 13.
- Educational institution Skip to question 2.

Tell us about you and your organization

2. Which of the following best describes your industry? *

Mark only one oval.

- E-learning
- Research
- Education management
- Primary/secondary education
- Higher education
- Other: _____

(continues)

2 (11)

5/13/2014

SURVEY: Indo-European Research & Innovation - Google Forms

3. Which of the following best describes your primary field? **Mark only one oval.*

- Arts
- Social sciences
- Physical sciences
- Earth sciences
- Life sciences
- Mathematics
- Healthcare sciences
- Computer sciences
- Agriculture
- Engineering
- Business
- Education
- Environmental studies and forestry
- Humanities
- Systems science
- Architecture and design
- Media and communication
- Law
- Military sciences
- Public administration
- Social work
- Transportation
- Other:

4. Counting all locations where your organization operates, what is the total number of persons who work there? **Mark only one oval.*

- 1-10
- 11-50
- 51-200
- 201-500
- 501-1,000
- 1,001-5,000
- 5,001-10,000
- 10,000+

3 (11)

5/13/2014

SURVEY: Indo-European Research & Innovation - Google Forms

5. What is your job level? **Mark only one oval.*

- Chancellor
- Vice Chancellor
- Director
- Dean
- Associate Dean
- Chairman/Trustee
- Head of Department (HOD)
- Professor
- Associate Professor
- Researcher
- Student
- Other:

6. Which country do you currently reside in? *

.....

7. Which city do you currently reside in? *

.....

*Skip to question 18.***Tell us about you and your organization**

4 (11)

5/13/2014

SURVEY: Indo-European Research & Innovation - Google Forms

8. Which of the following best describes your organization's industry? **Mark only one oval.*

- Agriculture
- Arts
- Construction
- Consumer goods
- Corporate services
- Education & research
- Finance
- High tech
- Legal
- Manufacturing
- Media
- Medical & health care
- Recreational
- Services
- Transportation
- Other:

9. Counting all locations where your organization operates, what is the total number of persons who work there? **Mark only one oval.*

- 1-10
- 11-50
- 51-200
- 201-500
- 501-1,000
- 1,001-5,000
- 5,001-10,000
- 10,000+

5 (11)

5/13/2014

SURVEY: Indo-European Research & Innovation - Google Forms

10. What is your job level? **Mark only one oval.*

- Owner
- Vice President
- Manager
- Team Leader
- Entry-level
- Intern
- Student
- Volunteer
- Other: _____

11. Which country do you currently reside in? *

12. Which city do you currently reside in? *

*Skip to question 18.***Tell us about you and your organization****13. Which of the following best describes your organization's industry? ****Mark only one oval.*

- Political organization
- Government relations
- Executive office
- Law enforcement
- Public policy
- Public safety
- Government administration
- International affairs
- Funding organization
- Judiciary
- Legislative office
- Military
- Other: _____

6 (11)

5/13/2014

SURVEY: Indo-European Research & Innovation - Google Forms

14. **Counting all locations where your organization operates, what is the total number of persons who work there? ***

Mark only one oval.

- 1-10
- 11-50
- 51-200
- 201-500
- 501-1,000
- 1,001-5,000
- 5,001-10,000
- 10,000+

15. **What is your job level? ***

Mark only one oval.

- Senior
- Middle
- Junior
- Other:

16. **Which country do you currently reside in? ***

.....

17. **Which city do you currently reside in? ***

.....

Skip to question 18.

Research & innovation

18. **Is your organization currently carrying out research & innovation activities? ***

Mark only one oval.

- Yes *Skip to question 19.*
- No *Skip to question 20.*
- I don't know *Skip to question 21.*

Research & innovation

5/13/2014

SURVEY: Indo-European Research & Innovation - Google Forms

19. How is your organization carrying out research & innovation activities? **Tick all that apply.*

- Internally
- With external partners based in India
- With external partners based in European Union and/or its Member States
- With external partners based elsewhere
- I don't know

*Skip to question 21.***Research & innovation****20. Has your organization considered carrying out research & innovation activities in the future? ****Tick all that apply.*

- Yes, internally
- Yes, with external partners based in India
- Yes, with external partners based in European Union and/or its Member States
- Yes, with external partners based elsewhere
- No, and has not considered it
- I don't know

*Skip to question 21.***Indo-European research & innovation****21. Are you aware of the opportunity to collaborate with European Union and its Member States in research & innovation? ****Mark only one oval.*

- Yes
- No

22. Which of the following EU research & innovation initiatives have you heard of? **Select all that apply.**Tick all that apply.*

- Inno INDIGO
- The EU 7th Framework Programme for Research (FP7)
- Horizon 2020
- None of the above
- Other: _____

8 (11)

5/13/2014

SURVEY: Indo-European Research & Innovation - Google Forms

23. Where have you seen information related to Indo-European research & innovation? *

Select all that apply.

Tick all that apply.

- Newspapers
- On-ground events (Roadshows, seminars, workshops, conferences etc)
- Scientific journals
- Social networking websites
- Other websites
- I haven't seen such information anywhere
- Email newsletter
- Other:

24. If you search information ONLINE about Indo-European research & innovation, how easy is it to find what you need? **Mark only one oval.*

- Extremely easy
- Very easy
- Moderately easy
- Not at all easy
- I don't know

Social media**25. Which of the following social networking websites have you registered an account with? ***

Select all that apply.

Tick all that apply.

- Facebook
- Google Plus
- LinkedIn
- Twitter
- YouTube
- None of the above
- Other:

26. Please mention any other additional social networking websites that you use.

.....

9 (11)

5/13/2014

SURVEY: Indo-European Research & Innovation - Google Forms

27. Which of the following devices do you use to access your social networking accounts? *

Select all that apply.

Tick all that apply.

- Computer tablet
- Desktop computer
- Laptop computer
- Smart phone
- Other:

28. How often do you use the following social networking websites? *

Mark only one oval per row.

	Daily	Weekly	Monthly	Less than once a month	Never
Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Google Plus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
LinkedIn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Twitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
YouTube	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

29. How often do you read professional blogs? *

Mark only one oval.

- Daily
- Weekly
- Monthly
- Less than once a month
- Never

30. Considering research & innovation, how useful would it be for you to have access to following information through social networking websites? *

Mark only one oval per row.

	Extremely useful	Very useful	Somewhat useful	Not very useful	Not at all useful
Industry news	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Information on project partners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Information on completed projects	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Industry events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Information on calls for proposal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Research papers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5/13/2014

SURVEY: Indo-European Research & Innovation - Google Forms

31. Considering research & innovation, how likely would you do the following activities on social networking websites? *

Mark only one oval per row.

	Completely likely	Very likely	Moderately likely	Not very likely	Not at all likely
Search information on calls for proposal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participate in professional discussions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Look for research partners	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Keep in touch with colleagues	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Professional networking	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Search funding opportunities for research & innovation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Search research papers	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Read about industry events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Read industry news	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

32. How well do you think these social networking platforms suit the purpose of sharing information about Indo-European research & innovation? *

Mark only one oval per row.

	Extremely well	Very well	Moderately well	Not very well	Not at all well
Facebook	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Google Plus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Blogs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
LinkedIn	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Twitter	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
YouTube	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

33. In your opinion, what kind of effects will social media have on research and innovation?

.....

.....

.....

.....

.....

5/13/2014

SURVEY: Indo-European Research & Innovation - Google Forms

34. Do you have any other comments, questions, or concerns?

Powered by
 Google Drive

APPENDIX 3. Cover email for online survey

Dear expert,

In an effort to **boost Indo-European research & innovation collaboration**, we are conducting a 5-minute survey with *carefully selected audience*. Your response is highly valuable to us.

Simply click on the link below, or cut and paste the entire URL into your browser to access the survey:

<http://goo.gl/Q2Ey8K>

We would appreciate your response by *8th May 2014*.

Your input will be kept strictly confidential. The results will be used by Finnish and other European agencies who support R&D&I collaboration with Indian partners, as well as in the final thesis conducted in Tampere University of Applied Sciences, Finland.

If you have any questions, please email me at johanna.peltola@gmail.com

Sincerely,
Johanna Peltola
+91-851-147-6106
Tampere University of Applied Sciences, Finland