



SUSTAINABILITY ROADMAP



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1 E-UNITE as a two-sided Network

E-UNITE like numerous other online endeavors may be classified as a two-sided network, that is, an online platform that attracts two distinct types of users; each of which derives positive externalities from the aggregation of participants at the other side of the network. Since participation from both sides is needed for a platform to be successful, a “chicken-and-egg” problem must be addressed. To make this point clear, we use as an example the Facebook (Lynch, 2007).

Facebook has end-users on one side while on the other side, has providers of services and applications developer who comprise an ecosystem and supplement the primary business model of the platform with new supplementary business models. The larger the number of Facebook users, the more appealing this platform becomes to service providers and application developers. Similarly, the more services and apps Facebook provides to users, the more they revisit the platform, the longer they stay, and the more they spend on provided services. From this perspective, we can identify that in E-UNITE, one side includes the youth workers and the other side organizations interested in initiating or funding projects concerning the promotion of tolerance and diversity. Thus, in this section, we will define the properties that we must maintain and the type of actions we must follow to ensure that E-UNITE becomes a successful platform.

In any two-sided Internet platform, we identify two properties that are of particular interest; namely, its design and the rules. We briefly elaborate on each one of these properties. The design defines the architecture of the services offered and the infrastructure required to be in place to facilitate the interaction between the participating sides. The set of rules affect the interactions of involved stakeholders (Eisenmann, 2006); for example, the pricing terms and the rights and obligations of participants. From an economic perspective, the literature on two-sided networks (Parker and Alstyne, 2005; Rochet and Tirole, 2003) builds upon classic literature (Katz and Shapiro, 1985); both will be examined in the sequel.

Within the information goods context, Parker and Van Alstyne (2005) identify



conditions that optimize subsidization strategies, namely, price reductions to the side that provides more network externality surplus to the other side. Rochet and Tirole (2002; 2003) characterize the structure of fees charged by the intermediary in monopolistic and oligopolistic settings; proving that the existence of “marquee” buyers, or exclusive/captive buyers, tends to increase the seller price because it makes the platform more attractive. Armstrong (2006) analyzes examples of two-sided market competition and discusses the effects of “multi-homing” (i.e., simultaneous participation in more than one network) by one side. The multi-homing side faces higher fees than the single-homing side because intermediaries compete harder to attract the “single-homing” side. Caillaud and Jullien (2001; 2003) consider networks with homogeneous participants on the two sides and intermediaries that provide matching services. They analyze competition among intermediaries based on both participation and matching fees and show that the best strategy to dominate the market and protect market share requires setting low participation fees, along with the maximal feasible transaction fees. Rochet and Tirole (2006) provide a literature survey and a formal definition of two-sided markets. Hagiu (2006) examines the effects of price commitment in platform settings where sellers arrive before buyers. Yoo et al. (2002) analyze the pricing of independent B2B marketplaces focusing on the impact of heterogeneous participant switching costs and Yoo et al. (2007) evaluate the welfare implications of different ownership structures and find that ownership by a network side increases participation and welfare.

As mentioned above, the design of two-sided networks is also a critical strategic challenge particularly, with regards to investment in technologies that create value for participants from one side vs. investment in technologies that create value for participants on the other side. For example, Facebook’s investment in the design of its platform increases the magnitude of network effects upon its users and its application providers realize from each other.

Relevant to our discussion is the literature on electronic intermediation and electronic markets. Bakos (1991a; 1991b) discusses the impact of electronic markets, including the reduction of search costs and network benefits, whereas lower buyer search costs in electronic marketplaces promote price competition among sellers (Bakos, 1997). Emerging roles for electronic intermediaries (Bailey and Bakos, 1997; Bakos, 1997) include



aggregating and matching buyers and sellers, providing trust and institutional infrastructure, and providing market information. Wang and Seidmann (1995) show that a supplier's adoption of electronic data interchange (EDI) can generate positive externalities for the buyer and negative externalities for other suppliers. Riggins et al. (1994) show that negative externalities in the supplier side may stall the adoption of a buyer-initiated inter-organizational system (IOS). Dai and Kauffman (2006) analyze the choice of a single buyer between using an independent e-market and creating a private network. Ghose et al. (2007) study the impact of Internet referral infomediaries in a supply chain. They show that retailers can use infomediaries as screening devices to identify high-valuation consumers. Bhargava and Choudhary (2004) show that an information intermediary with aggregation benefits should offer two levels of service quality. The low-quality level aids in increasing aggregation benefits. In our model, it is optimal for the intermediary to invest in network effects asymmetrically to maximize network benefits for one side. Weber and Zheng (2007) show that a search intermediary should base rankings of advertisers on a weighted average of product performance and the bid amount. We contribute to this literature by analyzing the intermediary's investment in cross-side network effects.

For the design of a two-sided network like E-UNITE, the consortium must concentrate its investment on one side subject to participation constraints for the other side (Eisenmann et al., 2006). In the E-UNITE case, the network effects have affected companies that wish to work with or donate to youth workers' initiatives; mainly because E-UNITE has already aggregated youth workers in its site. A more detailed financial plan for the platform may be found in section 4 (Financial Sustainability). Following theoretical findings, the optimal strategy for E-UNITE will derive the bulk of revenues from the side where the intermediary made the majority of its investment in creating network effects; that through donations and advertisements. Youth workers receive a positive value to participate in the platform, for instance, because they do not have any participation costs while they can pursue additional funding for their activities through the platform.

Several factors, however, may reduce this design asymmetry in the real world, including positive or heterogeneous participation costs, competition, the threat of entry, same-side network effects, strong cross-side inherent network effects that do not depend on



the intermediary's investments, and cross-side spillover effects for the design technology.

In conclusion, in this section, we studied two-sided networks, providing platforms that bring together two or more sides of network participants. We underlined that the success of these intermediaries depends on adopting appropriate pricing and design strategies. We analysed the situation for E-UNITE platform and provided useful insights towards the optimization of its profitability and growth, that is, towards its sustainable development.

The central assumption underlining the suggestions for E-UNITE design and rules is that the participation of youth workers in E-UNITE will be of significant volume. Although it has started in an auspicious manner through the initiation of this project, it is necessary to sustain it in the long run. We refer to the literature on Online Communities to derive a useful framework for maintaining and expanding the youth workers' side of the network in the following section.

2 Online Communities

Communities are regarded as significant sources of knowledge and learning. The Internet has allowed its users to connect to a growing amount of information and has enabled them to strengthen their professional and social networks through participation in online communities (Ardichvili et al., 2003). Online communities constitute open collectives of dispersed individuals with members who do not necessarily know each other but share common interests, and favour both their individual as well as their collective welfare (Sproull & Arriaga, 2007). They may be focused on social bonding, such as Facebook, creativity promotion, such as YouTube and InnoCentive or fostering innovation (O'Mahony & Ferraro, 2007; von Krogh & von Hippel 2006).

Online communities critically facilitate knowledge collaboration, which is the sharing, dissemination, accumulation, transformation as well as co-creation of knowledge and ideas (Ardichvili et al., 2003; Faraj et al., 2011). Community members offer expertise to others, while at the same time recombine, modify, and integrate knowledge and ideas that others have contributed. Knowledge collaboration is crucial for the sustainability of online communities, since individuals exchange and recombine their expertise in ways that benefit



both them personally, but also contribute to the community's welfare (Jeppesen & Fredericksen, 2006; Murray & O'Mahoney, 2007).

For the purpose of the E-UNITE Erasmus+ project, an Online Community is developed, where youth workers and youth from many different European countries, can have the opportunity to communicate, collaborate and share (converge, share ideas and help each other achieve community and network goals). In the majority of EU countries, youth workers are found in non-government and non-profit organizations and seek funding. Some rising questions can be:

“How and where can they successfully obtain funds, donations or other third-party financings”, “How can youth workers develop network: communicate, collaborate and share among themselves and with businesses in a way that adds value?”

The answer to the questions could be by providing a place (Online Community) where youth workers and businesses can interact - ubiquitously Communicate, Collaborate, and Share their community and network goals.

2.1 Commitment and Motivation in Online Communities

Despite their vibrancy and although online communities are regarded as equipped with the capacity to stimulate knowledge exchange, a significant number of them do not fulfill these expectations and participation drops to zero. Some members of the online community, who are referred to as elders and have been part of the community for a long time, regularly participate and support others, while others referred to as lurkers, do not take part (Bishop, 2007). Moreover, although satisfied members regularly consume content, it is harder to coax them to contribute new content and help recruit other members (Ray, 2014). A significant reason for this is that members are not sufficiently motivated to actively take part in learning sharing (Gal, 2004). To be thriving, online communities highly depend on member contributions and participation. Creating an online community and utilizing technological innovation to attract members, is not compelling enough unless members are intrinsically or extrinsically motivated to contribute to the community (Cabrera & Cabrera, 2002). Karau and Williams (2001) have attributed this to social loafing, people's tendency to



exert less effort on a collective task than on a comparable individual task.

Online communities highly depend on the commitment and voluntary participation of their members. Commitment profoundly impacts member willingness to stay in the community and contribute to it. More committed members are less likely to leave the community and look for alternatives. Nov and his coworkers (2010) have associated the increased level of participation in the community with higher levels of enjoyment, higher levels of commitment, and higher levels of the self-development motivation and reputation motivation. In an attempt to define successful online communities, Kraut, Resnick and their coworkers (2012) describe them as those that attract people and maintain their size over time, and mainly entail members who contribute the necessary resources for the community. Moreover, successful online communities regulate behavior effectively and limit the potential harm of inappropriate behavior. They distinguish between identity-based commitment and bonds-based commitment. Identity-based commitment entails people participating in a community because members feel a commitment to the community's purpose or topic. Some online communities are affiliated with communities of practice, namely groups of professionals with similar task responsibilities who exchange their experiences (Wick, 2000). Bonds-based commitment entails members feeling socially or emotionally attached to particular members of the community.

Motivation in online communities determines the quality and quantity of members' contributions. Being aware of the factors that motivate people to participate and the incentives required to increase motivation is crucial for the effective operation of online communities. Motivation can be based on intrinsic or extrinsic factors (Roberts et al., 2006). Intrinsic motivation refers to situations in which a person does something because it is inherently exciting or pleasant for him/her. Intrinsic factors can be divided into enjoyment-based and obligation/community-based (Lindenberg, 2001). Enjoyment, fun, and recreation appear to be important motivation factors in various online communities (Nov, 2007). Furthermore, intellectual challenges, opportunities for learning, and improving skills are necessary motives for contributing to many types of communities (Wiertz and de Ruyter, 2007). Extrinsic motivation is driven by external incentives and can be classified into financial, social, and organizational ones. Financial motivation entails cash, revenues, job

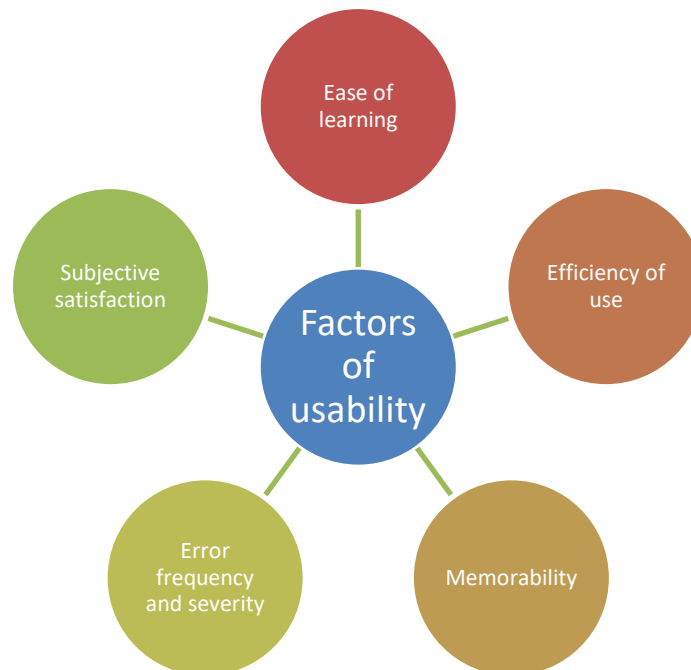


opportunities, and personal needs; social motivational factors include a perceived obligation, peer recognition, status, reputation gaining, experience, knowledge gathering, social bonds, social interaction, and networking, while organizational motivation includes prestige, career, and recruitment.

2.2 Usability and Sociability in Online Communities

Preece (2001) has identified two significant determinants of success for online communities, usability, and sociability. Usability is primarily related to the way how users interact with technology, while sociability is concerned with the way community members interact with each other via the supporting technology. The primary usability issues for online communities are dialogue and social interaction support, information design (how easy to read, understandable and aesthetically pleasing the provided information is), navigation (how easy is for users to move around) and access. Technological reasons, such as the novelty of the technology and possible difficulty in using it, a sense of trust communicating in an online world and restricted access, tend to influence participation significantly. Effective interaction in online communities highly depends not only on high usability but also on efforts fostering members' social cooperation as a group as well as coping with problems of sociability (Matzat, 2010).

According to Preece (2000), usability is concerned with how intuitive and easy it is for members to learn to use and interact, while sociability is concerned with developing policies and practices to support social interaction online. Usability measures the quality of a user's experience when interacting with a product or system—whether a Web site, a software application, mobile technology, or any user-operated device (Ktoridou 2019). In general, usability refers to how well users can learn and use a product to achieve their goals and how satisfied they are with that process. As usability is not a single, one-dimensional property of a user interface but rather a combination of the following factors (Nielsen, 2000):



- a. Ease of learning - How fast can a community follower who has never seen the community platform before, learn it sufficiently well to accomplish fundamental tasks;
- b. Efficiency of use - Once an existing follower has learned to interact on the community platform, how fast can he or she perform tasks;
- c. Memorability - If an existing follower has used the community platform before, can he or she remember enough to use it effectively the next time, or does the user have to start learning everything all over again?
- d. Error frequency and severity - How often do community followers make errors while interacting on the platform, how serious are these errors, and how do they recover from these errors.
- e. Subjective satisfaction - How much does the follower like using the community platform.

Three main components contribute to good sociability: purpose, people, and policies. “Purpose” consists in the community’s shared focus on an interest or need, offering a reason for members to belong to the community; “People” who interact with each other in the community and have both individual and social needs; “Policies” entail language and



protocols guiding members' interactions. More formal policies, such as registration policies and codes of conduct, are often required.

Significant sociability problems can be a lack of trust during the exchange of information between individuals, free-rider behavior, and a lack of stable membership (Matzat, 2010). Individuals do not know where the content they publish on the Internet, will get diffused (Barab et al., 2003), and thus, limited trust among members, might make them hesitant to share their information. Nonparticipation could also be attributed to the perception that participation can bring no value or fulfill no current need of members, mainly for those stating that they do not have time to spend on virtual interaction. Therefore, the perceived importance of shared knowledge is of critical significance for active participation. Also, a lack of trust in unknown information sources emerges as an additional discouragement to participate. Without selective incentives for members to become active, rational individuals might choose to exhibit free-riding behavior as theorists name members' tendency to withhold information and let others contribute to the knowledge exchange (Cress, 2003). In case this tendency is too high, the community's collective good is not promoted, members do not gain attractive benefits, and finally, this discourages their participation.

Online communities tend to suffer from insufficient membership stability (Chen, 2007); this disfavors the development of trust and reduces the motivation to participate in knowledge exchange. It is a common phenomenon that an individual may anticipate that his/her contribution to an online discussion might not be rewarded, since other members may leave the community after they have found what they need. Group size and passage of time are two factors that highly influence participation in online communities (Panek et al., 2018). As groups grow in size, participation becomes more highly concentrated among fewer members and member turnover declines. As time lapses, participation becomes more widely dispersed, and turnover increases.

2.3 Strengthening Online Community Engagement

Preece (2004) has made considerable suggestions to cope with sociability and usability issues to reinforce participation in online communities. Online participation is encouraged when communication is motivating and meaningful for participants; at the same



time, reward contribution is required. Moreover, reliable software, in combination with the implementation of community-run strategies, such as mentoring, tours, or meeting areas for new-comers, could significantly foster online participation. Participants need to be fully aware of norms and responsibilities, mainly concerning what they need to contribute and what they can expect as benefits. Also, participation could be significantly encouraged by making the community’s mission and purpose clear as well as by developing trust and empathy among participants. Regularly attracting and socializing new members to replace the ones who leave, is essential for the community’s sustainability. A community should identify, and encourage potential members having the characteristics, potential, and motivation to contribute.

2.4 Managing and Growing a “Strong” Online Community

The most popular way to organize people and accomplish tasks in a collaborative mode is achieved by building virtual teams around shared targets. Platforms used by a community should be driven by high-level goals and implemented through a co-developed design, while the technology can be selected subsequently. The Online Community for youth workers should consider the following elements:





A recommended practice comes from DotNetNuke (DNN):

1. Develop a plan
2. Build a lean community team
3. Select an easy-to-use technology provider
4. Build the community
5. Recruit your initial members
6. Seed activity in the community
7. Engage your initial members
8. Collect feedback from members
9. Review your results
10. Promote the community to a larger audience

For the E-UNITE project, the above steps have been grouped in the graphical representation of the Online Community Development Process (OCDP) (See Fig.1):



Figure 1 Online Community Development Process

Step 1: Discover the Community purpose -The initial step of the Online Community Development Process (OCDP) was to find the purpose. Then a unique online environment must be developed in a way that will enable youth workers, and youth from many different European countries to communicate, collaborate and share (converge, share ideas and help each other achieve community and network goals). Specifically, the following questions are formulated:

What are the interests of youth workers?

Will this Online environment support their mission?

What does this E-UNITE Online Community could offer them?

Step 2: Assign a Community Leader - The role of the Leader in an Online Community is an essential factor in achieving the goal of the community. Community leaders manage community discussions and assist community members with various topics (offer guidance, answer questions, handle



complaints, pass on concerns ask for feedback and reach out to new members). Some leaders may use analytical tools to evaluate the success of the online community (Ng, 2011). In summary, the Online-hub Leader must proactively manage the community; make connections between youth workers and businesses, and provide guidance when needed.

Step 3: Stay Focused - The online hub functionality must stay focused on bringing together youth workers and businesses for the specific cause.

Step 4: Build Trust and Credibility - Building trust and credibility is about meeting the expectations of community members from both sides, namely, the youth workers, and businesses.

Step 5: Grow the Online Community - The Online hub emphasizes on promoting a community that will create value to youth workers around the world, which requires an in-depth understanding of the needs, diversity, and culture. To achieve community growth, the community leader may devise and follow a strategic plan to:

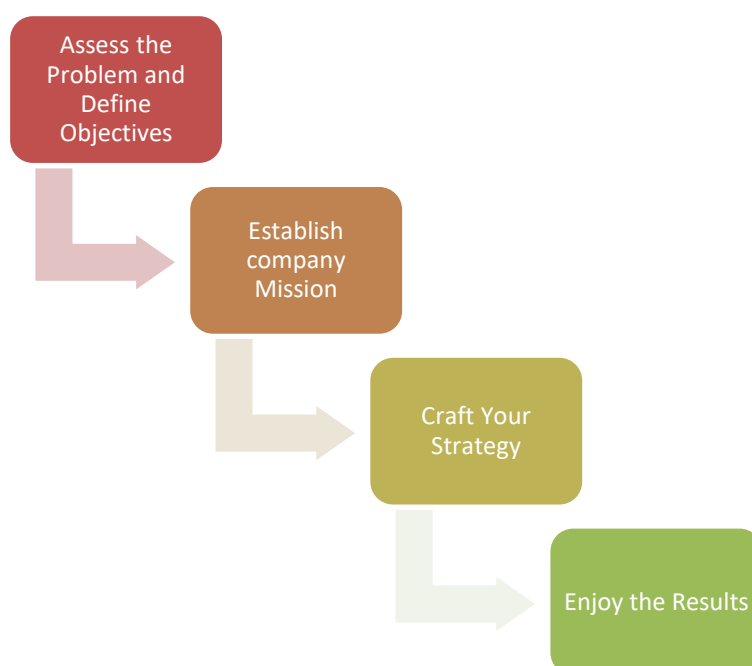
- I. Promote the group (Drive people into the community through email or any other means available. Active and continuous promotion will lead to growth).
- II. Develop Partnerships (Networking with third-party sites and groups may lead to substantial two-sided promotion; for example, to extend an invitation to various news media and powerful bloggers to rate your community or to motivate users to comment on the online community and become promoters themselves by inviting their connections).
- III. Sustain your Online Presence (Growing the online community takes much more than just posting content and waiting for users to follow. It is about earning the support and developing communities of loyal followers requires investment in people to establish a relationship (inspiring content, resources, and investment of time). Issues relating to sustainability and future growth will be discussed next.



3 Sustainability and Directions for Future Growth

One of the critical characteristics of any successful programme is the level of sustainability it may achieve. A growing number of organizations today are integrating sustainability into their business strategy. By doing this, they also realize that they can do well by doing good. Because sustainability looks at how companies ‘do good’, it is imperative to identify and understand what effect the organisation has on both the environment and society. Ideally, this effect should be a positive one on both, but realistically, this can also aim for a positive impact on one of the two. Several investors use Environmental, Social, and Governance (ESG) metrics to analyze an organization’s ethical impact and sustainability practices, showing just how crucial achieving sustainability is today.

Companies wanting to align their business sustainability strategy should:



Step 1: Assess the Problem and Define Objectives – The first step to driving change is assessing what sustainability means to the team, company, and industry and then set company sustainability objectives.

Step 2: Establish company Mission – this is considered to be an important part of



becoming a more sustainable business. To establish a company's mission, one should effectively capture an organization's values and purpose, and employ them as a guiding light of why they do what they do.

Step 3: Craft Your Strategy – ensure that a sustainable business strategy planned, but the top priority is to ensure profitability for the organisation.

Step 4: Enjoy the Results – remember to revisit this process periodically to assure that objectives, mission, and progress remain aligned.

For the E-UNITE platform, several directions have been planned out that seek to ensure growth and sustainability, and are presented next.

1. Youthwork development program: this program will focus on working with various partners to provide tailored training and guidance for youth workers. Through this program, needs for specialized training will be identified, and related partners (companies or other organisations) and relevant mentors will be sought out to materialise training.
2. Youthwork technology program: in this program, mobile technology will be leveraged to support youth workers. Several partners in the mobile ecosystem will work together to develop, for example, mobile applications to address needs, training for youth workers on using these technologies efficiently.
3. Mentoring youth workers program: mentors are an integral part of the E-UNITE platform. Through this platform, youth workers will be able to be mentored by a selected group of mentors. This mentoring will be done by accessing the MYNNOVA platform (located at <https://euromentor.eu/>), a platform that brings together both mentors and mentees to be trained in a wide array of topics.
4. Research on youth workers- continuous research on youth worker-related issues, will need to be carried out so that potential new trends and/or needs can be identified and addressed promptly. Open communication on the platform will be monitored continuously and will be considered as ongoing research, but more structured research plans are planned in both the short and long run.
5. Research on the platform – also critical is continuous research to be done for issues specifically related to the platform. Indicators will need to be identified that can help



measure sustainability, e.g., evaluate whether the platform/hub saves users time or effort, as these indicators drive the likelihood that it will be used over the long term. Baseline data on sustainability indicators will be gathered; progress will be analyzed and reviewed; users/stakeholders will be asked for additional insight. Possible improvements could then be identified that might ultimately increase the platform's sustainability. Finally, careful monitoring will be done continuously to ensure relevancy, necessity, and impact of the platform.



4 Financial Sustainability

European Youth Networks for Diversity and Tolerance																						
Projected Cash Flow/Cash Budget																						
	Notes	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12	Y1 TOTAL	Q1	Q2	Q3	Q4	Y2 TOTAL	Y3	Y4	Y5
		€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€	€
Cash Inflows																						
Initial Subsidy	1											3250		3250				4550	4550	6500	7875	9450
Seminar	2																					
Advert	3	500	500	500	500	500	500	500	500	500	500	500	500	6000	2480	2480	2480	2480	9920	8400	8400	8400
Total Cash Inflows		500	500	500	500	500	500	500	500	500	500	3750	500	9250	2480	2480	2480	7030	14470	14900	16275	17850
Cash Outflows																						
Web Hosting		360												360	360				360	360	360	360
Content Update		200	200	200	200	200	200	200	200	200	200	200	200	2400	600	600	600	600	2400	2400	2400	2400
Administrator		100	100	100	100	100	100	100	100	100	100	100	100	1200	300	300	300	300	1200	1200	1200	1200
Other		50	50	50	50	50	50	50	50	50	50	50	50	600	300	300	300	300	1200	1500	1500	1500
Total Cash Outflows		710	350	350	350	350	350	350	350	350	350	350	350	4560	1560	1200	1200	1200	5160	5460	5460	5460
Net Cash Flow		-210	150	150	150	150	150	150	150	150	150	3400	150	4690	920	1280	1280	5830	9310	9440	10815	12390
Balance B/F			-210	-60	90	240	390	540	690	840	990	1140	4540		4690	5610	6890	8170		14000	23440	34255
Balance C/F		-210	-60	90	240	390	540	690	840	990	1140	4540	4690		5610	6890	8170	14000	14000	23440	34255	46645



Notes

1. Initial Subsidy

2. Annual Seminar		Year 1	Year 2	Year 3	Year 4	Year 5
Seminar	Participants	25	30	40	50	60
	Fee	120	140	150	150	150
	Sponsors	2,500	3500	5000	6000	7200
	Total Income	5500	7700	11000	13500	16200
	Participants Exps	2250	3150	4500	5625	6750
	Net Income	3250	4550	6500	7875	9450

*Expected organised November each year. Participants expenses 75% of participants fee

3. Advert		Year 1	Year 2	Year 3	Year 4	Year 5
Estimated adverts on page.	Main					
	Number	2	2	2	2	2
	Fee/ month	150	150	150	150	150
	Total	300	300	300	300	300
	Secondary					
	Number	5	8	10	10	10
	Fee/month	40	40	40	40	40
	Total	200	320	400	400	400
	Grand Total/Month	500	620	700	700	700
	Grand Total/Year	6000	7440	8400	8400	8400



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