

Screening Opportunities

In preparation for the 2012 Olympic Games in London, the United Kingdom, as the host, is coveting gold, silver and bronze. In recent games, the country was among the top ten medal winners, but it wants more. So in 2006, the British Olympic Association announced a campaign to improve the country's medal count. Its 20-4-2012 initiative, standing for 20 gold medals and a fourth place in the overall count, aims to evaluate 1.5 million British children, ages 11 through 16 (in 2006), and recruit those with the most athletic potential into Olympic sports like judo, badminton and rowing.

- In a first round, the physiological data of each of the 1.5M children is compared to a set of profiles, which capture the ideal pre-conditions for all Olympic sports (e.g. basketball players are tall and rowers have a high cardiovascular capacity).
- The 100,000 most promising young athletes are invited to enter into the second round, which consists of a full day packed with various sports-specific diagnostics.
- The best 1000 will then finally be selected to start training with the appropriate specialized coaches

The British medal push shares a critical quality with corporate innovation: a particular individual can apply only the sweat and toil of daily hard work to increase his chances of winning gold, but a nation, like a company, has a much more powerful lever, namely *selection*. A well-designed selection process will prevent a country from wasting its limited resources trying to turn wisps into weightlifters and will ensure that talented athletes are identified and supported. And it will do so efficiently.

Opportunity screening, the subject of this chapter, is the first step in the selection process that aims to identify the exceptional idea out of the pool of ideas created by the process outlined in Part I of this book. In that sense, opportunity screening is the qualification phase of the innovation tournament aiming to identify the opportunities that are allowed to move forward to the play-offs.

What makes a screening process work? Whether it's British measurements of athleticism or a company's selection of innovations, an effective screening process must fulfill two requirements:

1. Given the large number of opportunities that have to be screened, the screening process needs to be *efficient*. In other words, opportunity screening needs to be inexpensive and fast, favoring the use of heuristic decision making and using imperfect information over extensive data collection and endless discussions.

2. The screening process needs to be *accurate* despite the large amount of uncertainty that still clouds the opportunity.

The two requirements, accuracy and efficiency, are obviously in tension with each other. On the one hand, you would like to examine all opportunities in detail, so you do not kill the wrong ones. On the other, given the amount of work associated with in-depth review, you would prefer to focus on the most promising ones.

The best way you can overcome this tension is by evaluating opportunities in multiple rounds. From round to round, you narrow the field of opportunities and that then enables you to more carefully assess those that remain. In the first rounds of screening, filtering is done with an emphasis on efficiency. As the opportunities reach the later stages, the emphasis is shifted more and more to accuracy. This is the innovation tournament we outlined in the Introduction chapter.

Consider the UK Olympics example provided above: the first round of profiling the young athletes can be done by a computer requiring neither coach nor athlete to be present; the second round requires only a day of coaching time and some local travel from the athletes; yet, in the third round, the remaining athletes are evaluated by expert coaches in great detail. The opportunity screening process resembles a director's casting for a movie, a consulting firm's recruitment of new trainees or the tryouts for professional sports teams.

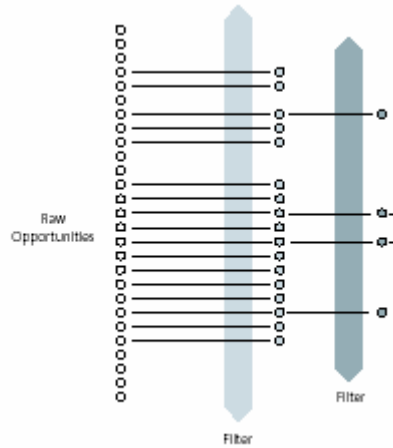


Exhibit TWO FILTER: Innovation tournament for the screening phase

The logic behind the innovation tournament is summarized in Exhibit TWO FILTER.

Opportunities enter on the left of the exhibit (see Chapter OP (Identifying Opportunities)) and move through several rounds of screening. The best ideas will be moved forward for an in-depth analysis described in the coming chapters.

Many books on innovation and R&D management refer to variants of this Exhibit TWO FILTER as the “innovation funnel.” But the funnel metaphor doesn’t quite work. In a funnel, whatever enters also leaves. A good screening process, in contrast, eliminates many opportunities, preventing the bad ideas from leaving. It’s more of a filter than a funnel. A funnel also has a one-way flow. But in a good innovation process, the “downstream” (the company’s innovation portfolio) provides feedback to the upstream (the creation and screening process). (see chapter MANAGING TOURNAMENTS).

In this chapter, we outline an innovation tournament consisting of three rounds of filtering. In the first round of filtering, the emphasis is on efficiency. Opportunities are pitched and voted on electronically using a web-based system. This method can handle hundreds of opportunities of which the best are allowed to move to the next round. In the second round of filtering, we aim for a balance between efficiency and accuracy. Opportunities are pitched and voted upon in an innovation work-shop. In the third round of filtering, the emphasis is shifted from efficiency towards accuracy. Now, each opportunity is evaluated on a number of predefined criteria, measuring its feasibility and its financial attractiveness.

Efficiency Driven Screening: The Early Tournament Rounds

To get a sense of what *screening* has to accomplish, examine Exhibit STUDENT-IDEAS. This exhibit shows a small fraction of the 234 opportunities that were created as discussed in the previous chapter (see Chapter OP (Identifying Opportunities)). Faced with a large number of ideas like this list, the first round of the innovation tournament has to focus on efficiency. Creating opportunities is cheap. So a smart company will generate lots of them, giving it more possibilities for success but also more chances to make mistakes in selecting which to develop.

Online Service Professional Rating	Executive Compensation Index ("ECI")
Peer-to-Peer Gaming	The Ultimate Travel Assistant
Smart Parking Meter	Heated Ski Poles
"GeriAthletes" - Exercise facilities for those over the hill	Cell Phone Detector for Retail Businesses
Fuel price hedging website	Fuel Price Guru
"SureTemp" - Programmable temperature faucet	Airport Haven
Pooled Purchasing Marketplace	Keeping track of your shopping lists online
Chaat - Indian Snack House	College-Level Programs Over the Radio
Coaching for Coaches	Internet TV Guide
Sports Ticket TimeShare	Groceries Drive-Thru
Home Energy Consultants	Complain-O-Rama
Total Health - Holistic meets Classic Medicine	CharmBus - Portable Beauty Consultants
Outsourcing agency for small companies	Marketing Communications Consulting
Life Planning Simulator	HandyMan Valet
NannyOnCall	Business School Identifier
Kid Service website – "ParentsHelp"	Airplane Dating
Fill my iPod (cause I don't have time to do it myself!)	Lux Linens
Cell-phone Door/Garage-Door Opener	Healthy Coffee
Child Care on Demand	Disposable Car Cover
Virtual Executive Assistants	Indian Mall Restaurants
Low Carb ice cream in India	Resealable Flexible Packaging for Cereal
Wireless Headphones for Multiple Listeners	IntelliAds - We Know Who You Are
Vacation Designer	SMS Daily Local Weather Update Service
Online E-books for Textbooks	Car Consultants
Tandem Umbrella Stroller	ARiddleADay
Website to Fit PDA Display Screen	HandyMan Valet, Painting Service
Education SuperSite	Online Airport Guide
Voice activated car controls	Fido For-A-Day
Diversity Recruiting	Star Sightings
Service Bartering	Global Impact Calculator
Gift Advisor	Cell Phone Over the Radio

Exhibit STUDENT IDEAS: The exhibit shows a small fraction of opportunities that were created with less than 100 person-hours of input. Each opportunity includes a text description (not shown). New web-based tools can expand the creation process and allow companies to obtain even larger numbers of ideas from the outside world. That, too, dramatically increases the number of opportunities that must be screened.

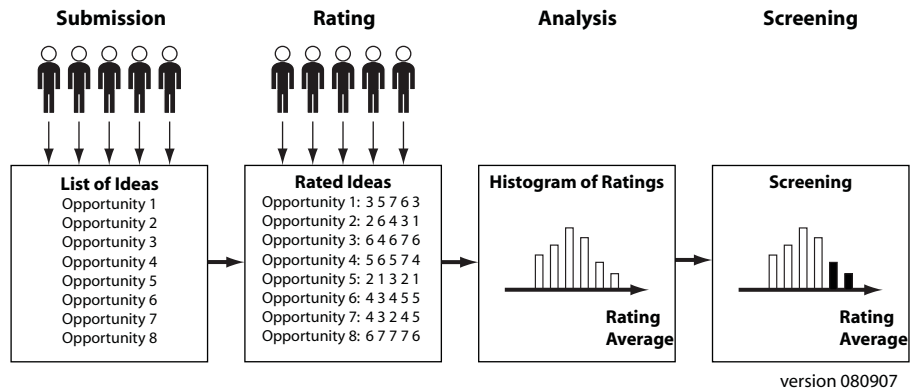


Exhibit DARWINATOR: Along with this book, we developed a software tool, called the Darwinator, which we have found to be powerful in its support of opportunity screening. Available through the book website, it supports the submission of opportunities, the multi-voting process, and the statistical analysis of the votes.

Along with this book, we developed a web-based software tool, called the Darwinator, which we have found to be powerful in its support of handling the early rounds of an innovation tournament. It starts by allowing any participant to submit opportunities (see Chapter OP (Identifying Opportunities)) using the one page format as we saw in chapter IDENTIFYING OPPORTUNITIES. The web-based interface ensures that the participants don't know the author of each idea, so they later will vote on the opportunity, not its inventor. In addition to text, participants can upload graphics or other supporting documents. Submissions to the Darwinator thus resemble a modern version of the good old employee suggestion box.

After all opportunities have been submitted, participants rate the opportunities. Our first round tournament goal of efficiency is accomplished in two ways:

- since each opportunity is summarized on one single slide, it typically takes only about 1 minute to rate an opportunity on a scale ranging from “poor” (numeric score of one) to “excellent.” (numeric score of 5)
- The Darwinator allows you to limit the number of participants voting on an opportunity. Instead of having each opportunity be viewed by every member of the voting population, electronic voting can use opinion polls of smaller sub-groups to create an inexpensive

evaluation. It is typically sufficient to present each opportunity to a small sample of voters (e.g. 10 to 20 voters).

The main strength of the web-based voting and our Darwinator method is that it can handle a larger number of opportunities. For example, we used this technique to review the 234 opportunities mentioned previously and have each opportunity be scored by 20 raters. If we collect 20 votes per opportunity, for a pool of 234 opportunities, we would need 4,680 ratings, which corresponds to less than 10 ratings per participant in a group of 50.

Based on the votes the opportunities receive, we need to decide which opportunities are allowed to move to the next round of the innovation tournament. Typically, you would move forward an opportunity if (1) it has a high average rating, (2) it is polarizing with some loving it and others hating it, or (3) it can be addressed with very few resources, a “low-hanging fruit.”

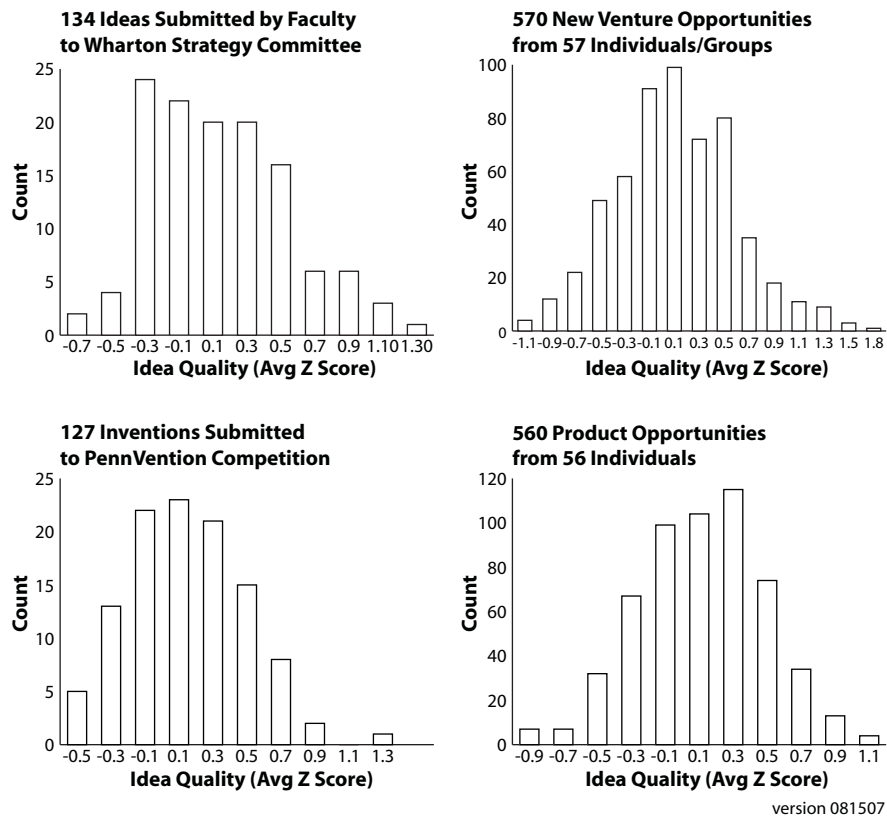


Exhibit FOUR GRAPHS: The outcome of the multi-voting process is a small set of opportunities that has received strong support from the voting populations, which are the opportunities to the vary right on each curve. Note: the x-axis corresponds to the z-score of the opportunity. The z-score indicates how far (and in what direction) the

score of an opportunity deviates from the overall distribution, expressed in units of the distribution's standard deviation (see web-site for statistical details).

NOTE: THESE GRAPHS NEED TO BE REDONE FOR RETURN CURVE LOGIC

Balancing Efficiency and Accuracy: The Innovation Workshop

In an innovation work-shop, a group of 20 to 50 participants come together for a half-day or full day long meeting. Opportunities are presented (“pitched”) orally supported by visuals such as posters, photos, or standard Powerpoint slides. Such “live” presentations are somewhat more time consuming than the web-based interface we discussed above but this expense comes along with the reward of higher accuracy. This is why an innovation work-shop makes a good second filter in an innovation tournament.

The field of participating opportunities is still large, so it remains essential to limit the presentation of an opportunity. The presentations of opportunities should follow the 2-1-0 rule:

- Two minutes of presentation by an individual (do not use a group presentation!). A bell is used to keep the presenters on schedule
- One page of a slide or a poster to provide visual support, if needed
- Zero questions, or discussion

This sounds brutal – but if you have ever listened to a 20 page Power-point presentation of a really dull idea, you appreciate this approach. There will be a time of discussion and careful planning, but this is not it.

Innovation work-shops works well up to some 50 opportunities. If the number of opportunities considered is larger than 50, we suggest to break up the tournament into sub-tournaments and have the winners of the sub-tournaments come together in the play-offs of the innovation tournament. Alternatively, for a large number of opportunities, you can use another round of the web-based screening process discussed above.

Following the presentations, opportunities are voted on. There exist multiple ways of using multi-voting techniques in an innovation work-shop. We have found two forms to be the most effective:

- Sticker voting using a poster for each opportunity and a sticker for each vote
- Voting with electronic voting devices

With the sticker voting method, you display opportunities on flip-charts, white boards, or simply write them on big sheets of white paper and taped on the wall of a meeting room. Each opportunity should be summarized with a one-page description, and workshop participants should have had a chance to acquaint themselves with all of the ideas before the meeting. At the meeting, they're given Post-it™ notes (or something similar). They then simply stick their notes beside the opportunities they favor.

There's no right answer with respect to how many opportunities each participant should be allowed to endorse. Common rules of thumb recommend giving each participant between 10 percent and 20 percent of the total number of opportunities as votes. In other words, if there are 50 opportunities, each participant should be able to vote for 5 to 10 of them. In small groups, especially, participants get multiple votes because each vote would otherwise carry a lot of weight, and at this stage, you're trying to narrow down a list of opportunities, not pick a single winner. With a larger number of participants, you can cut the number of votes for each one.¹

How many participants should be involved? Again, recall that at this stage, the objective is not to make a final decision but to quickly weed out the bottom half of the opportunities. The guiding principle is illustrated in Exhibit TWO FILTER: the really tough decisions are still to come, and you should not waste your colleagues' time and intellect aiming for perfection at this stage. More important than numbers of participants is having people representing different parts of your organization.

Innovation work-shops typically work well if it is possible to display a poster visualizing each opportunity. Participants then can move around the room to place their sticker votes.

An alternative approach of organizing the multi-voting is to run the innovation workshop using electronic voting technology. For example, the company TurningPoint offers a voting tool consisting of a USB plug and a set of remote controls (one for each voter) with numbers ranging from 0 to 9 on them. A way to run the innovation tournament is to have the opportunity pitched followed by an immediate vote (the vote corresponds to each participant keying in their rating on their voting device). This approach works particularly well if the voting is based primarily on an oral presentation as opposed to posters summarizing the opportunity.

There are two advantages of this technology. First, casting the votes electronically avoids a “herd” mentality. While with sticker-voting a participant is influenced by where other participants stick their votes on the white-board and might also be intimidated by the fact that her voting act is carried out in public (e.g. being observed by a senior manager), electronic voting is better to reveal the “true” underlying opinion of the group.

Second, this type of multi-voting can quickly identify interesting patterns such as “This opportunity is preferred by our European sales organization” or “Opportunity x polarizes people; they either love it or hate it.” Thus, for each opportunity we can consider summary statistics besides the mean rating an opportunity has received. Useful ones are the number of raters who assigned the highest possible score to the opportunity or the variance of the rating.

Independent of whether you vote by posting stickers or by using voting devices, we suggest that you keep the following in mind when organizing an innovation work-shop

- Allow people to champion an idea: at the screening stage, you might want to move an idea forward that got a poor average rating, yet had a few very enthusiastic supporters. Strong, polarizing opinions are often leading indicators for really exceptional ideas. So, instead of just looking at the average vote, it is often helpful to count the number of enthusiastic votes (e.g. 5 out of 5).
- Identifying hot-spots: when voting on opportunities, it can be a useful exercise to categorize the opportunities by identifying clusters of related opportunities. Large clusters of similar opportunities, sometimes called *hotspots*, reveal what the opportunity creators are focusing on.² Hotspots can also point out to potential problems that could arise during voting: if, say, five opportunities are almost identical, yet are presented as different in a vote, each alone might not be able to achieve enough support leading to an undesirable elimination of all the related ideas.

Emphasizing Accuracy: Opportunity Screening Based on Criteria

Multi-voting is fun and efficient. Voters look at or listen to an opportunity and then assign one score summarizing their assessment of the opportunity. Given the short amount of time available for presenting an opportunity and the holistic judgment of the voters, votes are typically formed based on gut-feel and managerial intuition. Now, there is nothing wrong with gut-feel and intuition. To the contrary – our intuition is what allows us to make good (or maybe decent) decisions in absence of complete information. But, as we reach the later rounds of the innovation tournaments, subjective decision making based on incomplete information should be complemented with the application of objective criteria and data.

Here, we discuss two ways to evaluate opportunities with a focus on accuracy: scoring the opportunity on a set of pre-specified attributes and applying a set of criteria to capture the likelihood of a future business success.

While in the previous stage of the tournament we attempted to summarize the quality of an opportunity in one single number, we can also score the opportunity on a number of pre-defined *attributes*. As an example, consider the data displayed in Exhibit MERCK SUBJECTIVE. The exhibit shows a set of chemical compounds under consideration for further development at Merck.³ Each one is scored (1 being the lowest score and 5 being the highest score) on four criteria: potency, safety, strategic fit, and financial return. Note, that two of these criteria are technical (medical, in this case) and two are driven by the business needs. When creating a table such as Exhibit MERCK SUBJECTIVE, you should, if possible, create objective guidelines for what constitutes, say, a score of 5 for safety. This score, for example, might correspond to specific chemical and medical properties.

If a set of opportunities doesn't lend itself to objective scoring, consider using experts, operating independently of each other, to assess the opportunities. The resulting scores can then be compared for patterns suggesting differences in opinions among your experts. Take an example given in Exhibit MERCK SUBJECTIVE. If the experts all score drug candidate Y (a diabetes treatment) as a 4 for safety, no further discussion is needed at this stage. If, however, they disagree about its safety, the group could discuss this particular attribute. Instead of wrestling

with the daunting question of “Which opportunities should we pursue,” the agenda item for a meeting would simply be “Safety evaluation for Y.” Typically, following such a discussion, scores tend to converge.

Compound	Indication	Potency and Selectivity (1-4 scale)	Safety (1-4 scale)	Strategic Fit (1-4 scale)	Potential Financial Return (1-4 scale)
A	Respiratory-1	3	3	2	2
B	Respiratory-1	2	2	2	2
C	Respiratory-2	2	4	2	2
D	Obesity-1	3	2	4	4
E	Obesity-1	2	2	4	4
F	Obesity-2	2	2	4	5
G	Obesity-2	1	2	4	5
H	Depression-1	3	2	2	4
I	Depression-1	3	2	2	4
J	Metabolic disorder-1	4	2	2	4
K	Metabolic disorder-1	2	4	2	4
L	Cardiac-1	4	1	1	1
M	Cardiac-1	3	2	1	1
N	Cardiac-2	2	4	1	2
O	Alzheimers-1	2	2	4	2
P	Alzheimers-1	2	2	4	2
Q	Parkinsons-1	2	3	2	4
R	Osteoporosis-1	3	3	3	1
S	Osteoporosis-1	2	3	3	1
T	Pain-1	4	3	3	2
U	Pain-1	3	3	3	2
V	Pain-2	3	3	3	4
W	AIDS-1	3	1	1	2
X	AIDS-1	2	2	1	2
Y	Diabetes-1	2	4	4	4
Z	Diabetes-1	2	3	4	4
AA	Diabetes-1	1	3	4	4
BB	Diabetes-1	2	4	4	4
CC	Diabetes-2	2	3	4	5
DD	Diabetes-2	3	2	4	5

Exhibit MERCK SUBJECTIVE: The table shows a list of 30 compounds that Merck considered for pre-clinical development. Each of the compounds is scored on four criteria: potency, safety, strategic fit, and financial return.

As an alternative method to objectively and comprehensively assess the quality of an opportunity, consider the *Real-Win-Worth-it* (RWW) criteria, developed by 3M. The name, *Real-Win-Worth-it*,⁴ summarizes the three questions the organization attempts to answer when screening opportunities:

- Is the opportunity *real*, that is, is there a real market that we can serve with a real product? Criteria for this include market size, price points, availability of technology, and the ability to execute by producing and delivering the corresponding product or service at high volume.
- Can we *win* with this opportunity, that is, will we have a sustainable competitive advantage? Criteria include patent protection, branding, and whether you're more capable of executing it than competitors (for example, do you have superior engineering talent in this field).
- Is the opportunity *worth it* financially? Do we have the resources needed (financial and developmental) and are we confident that the investment will be rewarded with appropriate returns?

Exhibit RWW applies the criteria applied to the opportunity SpoilMySpouse discussed in the Chapter OP (Identifying Opportunities) from the hypothetical perspective of Google considering the opportunity. The Excel checklist with the criteria is available from our book website.

Real, Win, Worth It (RWW) Framework - "Spoil My Spouse" Example

		Notes
1. Is there a real market and a real product?		
Is there a need? (What is the need? How is the need presently satisfied?)	Yes	
Can the customer buy? (size of the market, customer decision making process)	Yes	
Will the customer buy? (perceived risks and benefits, expectations on price and availability)	Yes	Not clear if they would pay.
Is there a real product concept? (line extension vs new to the world)	Yes	
Is the product acceptable within the social, legal, and environmental norms?	Yes	
Is the concept feasible? Can it be made? Is the technology available? Does it satisfy the needs?	Yes	
Will our product satisfy the market? Is there a relative advantage to other products?	Yes	Can be linked with other personalized Google products.
Can it be produced at low cost?	Yes	
Are the risks perceived by the customer acceptable? What are the barriers to adoption?	Yes	
	Net	YES
2. Can we win? Can our product or service be competitive? Can we succeed as a company?		
Do we have a competitive advantage? Is it sustainable? (performance, patents, barriers to entry, substitution, price)	Yes	
Is the timing right?	Yes	
Does it fit our brand?	Yes	
Will we beat our competition? (How much will they improve? price trajectories, entrants)	Maybe	AOL and Yahoo have easier access to the consumer wallet.
Do we have superior resources? (engineering, finance, marketing, production; fit with core competencies)	Yes	
Do we have the management that can win? (experience? fit with culture? commitment to this opportunity?)	Maybe	Little experience with subscription services. Advertising model better.
Do we know the market as well or better than our competitors? (customer behavior? channels?)	Maybe	Some insights on the consumer's willingness to pay are missing.
	Net	Probably
3. Is it worth doing? Is the return adequate and the risk acceptable?		
Will it make money? (ROI, NPV)	Yes	If tied to an advertising model.
Do we have the resources and the cash to do this?	Yes	
Are the risks acceptable to us? (What could go wrong? technical risk vs. market risk)	Yes	
Does it fit our strategy? (fit with our growth expectation, impact on brand, embedded options)	Yes	
	Net	YES

Exhibit RWW: The *Real-Win-Worth-it* criteria applied to the opportunity SpoilMySpouse discussed in the Chapter OP (Identifying Opportunities) from the hypothetical perspective of Google considering the opportunity. The Excel checklist is available from our book website.

In addition to its high accuracy, another advantage of the RWW criteria is that they can also be communicated to those generating the opportunities. If a large consumer products firm articulates to its employees that it is only interested in innovations that serve currently existing markets, it has the potential to increase the quality of the incoming opportunities with respect to this criterion. Understand, however, that the RWW criteria will align the creation of new opportunities more closely with your current business needs. The approach therefore is somewhat biased in favor of Horizon 1 innovations. By their very nature, Horizon 3 innovations lie outside of the limits that the RWW questions impose.

Practical Advice on Organizing Early Stage Innovation Tournaments

The previous sections have outlined how to apply innovation tournaments to screen innovation opportunities. We have outlined three types of filters that differ in how they trade-off efficiency with accuracy. Applying these filters starting with the most efficient and ending with the most accurate allows you to systemically filter opportunities, starting with a broad set of opportunities of varying levels of quality, and then identify a set of opportunities that have the potential to become the exceptional opportunities you are looking for.

Beyond the usage of the three types of filters outlined in this chapter, we found the definition of the scope of the innovation tournament, the refinement of opportunities from one round to the next, and the customization of filters for the specific company context to be important considerations leading to more successful tournaments.

Define Scope of the Tournament: Sort Opportunities into Strategic Buckets

Opportunities not only vary widely in their quality. Opportunities also vary in the extent to which they support the various strategic initiatives going on in the company. Some opportunities aim towards the development of new markets, others aim at the development of new capabilities or technologies. Some opportunities are risky but have the potential to lead to Big I innovation, while others are less risky but only lead to incremental, little i innovations.

In chapter PULL FROM STRATEGY we discussed how opportunities can be grouped into three horizons depending on their emphasis on exploration vs exploitation. Faced with such a mix of

opportunities representing differing levels of novelty in technology and or markets, it often can be difficult to run one big innovation tournament with all innovation opportunities. There are two reasons for this:

- It is difficult to compare two opportunities with each other if one aims to launch a global satellite network for mobile communications while the other one aims at adding two new colors to an existing cell-phone models. You simply cannot compare a weight-lifter with a runner!
- At the end of the screening process, we might have a large number of opportunities exploring new markets with existing technologies, yet, we have not considered any opportunities that would use new technologies in our existing markets.

Given these problems, it is best to run separate innovation tournament, one for each strategic initiative. For example, you might want to run three separate innovation tournaments, one for horizon 1 opportunities, one for horizon 2, and one for horizon 3. Alternatively, you might even consider running nine separate tournaments, each tournament corresponding to a combination of technology novelty (1: existing technology, 2: new to the firm technology, 3: new to the world technology) and market novelty (1: existing market we currently serve, 2: existing market that we currently do not serve, 3: non existing market).

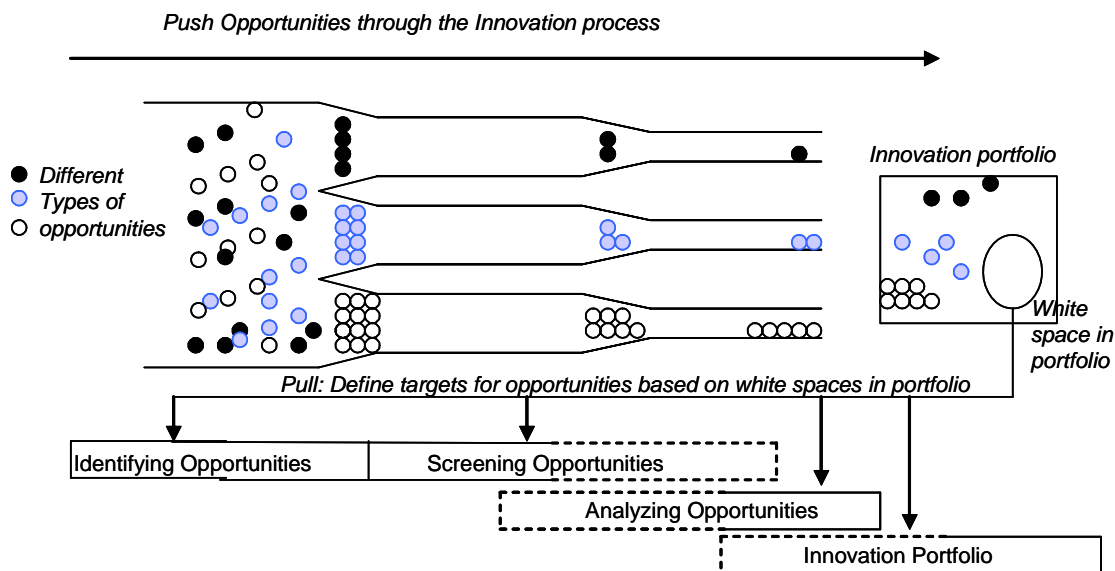


Exhibit SCOPE: Instead of running one big innovation tournament, it is often advisable to run separate tournaments, so that each tournament consists of comparable opportunities.

You can define the scope of the tournament(s) before or after generating the opportunities. If you define the exact scope before the opportunity generation, you can direct the creative efforts of the organization so that you achieve a balanced set of opportunities across strategic initiatives. If you wait with defining the scope until after the opportunities have been generated, you might leave some important initiatives unsupported by opportunities. However, you might also be surprised about some really exceptional opportunities that would not have been created if a (much narrower) scope of the tournament had been announced earlier on. Exhibit SCOPE summarizes the logic of first generating opportunities and then sorting them into sub-tournaments of comparable opportunities.

Refine Ideas Between Rounds of the Tournament

Before we move the winning (surviving) opportunities to the next round of the innovation tournament, we should look for ways to refine and improve them. Since the level of detail of the presentation of the opportunity increases from round to round in the tournament, it is important to further elaborate and refine the opportunity.

While this can best be done by the person who initiated the idea, you might consider allowing participants to generate rapid feed-back and improvement suggestions. At this stage, quick feed-back consisting of 50 word long comments or suggestions can have an enormous impact on the refinement of the idea. We found that it typically takes about 3 minutes for each voter to add a quick comment to the vote. So while this might be too time consuming in the initial round of the tournament, it can be very helpful once the set of ideas has been narrowed down to the 10-30 range.

Find Out What Works For You

In this chapter, we have outlined the architecture of a three round tournament, starting with a web-based submission and voting of hundreds of opportunities, then moving to an innovation

work-shop where ideas are presented and again voted upon, ultimately leading to a detailed, multi-attribute analysis of each opportunity. We found this architecture to be very effective in a number of industries, ranging from professional services to the formation of new start-ups. However, as the following three examples illustrate, it is possible to modify the architecture of the tournament to your specific business needs:

- in some industries, the number of new opportunities might be small or the organization might not be good at generating a large number of them. In such cases, we found it to be most effective to jump immediately to the innovation work-shop (i.e. to by-pass the web-based voting system). The work-shop could start with some dedicated time for opportunity generation (either individually or in groups, see chapter IDENTIFY) and then directly moves to the multi-voting.
- If the criteria that are used to evaluate opportunities are extremely simple and can be applied with little effort (maybe even by a staff person), it is also possible to use a criteria based filter early on in the tournament when the focus is primarily on efficiency.
- Vice versa, if it is hard to break up the quality of an opportunity into distinct attributes, even the last round of the tournament could be based on multi-voting, especially if the voters are also the decision makers as far as further funding of the opportunities is concerned.

Thus, as long as the tournament consists of a sequence of filters, starting with efficient filters and ending with accurate filters, many modifications of the logic outlined in this chapter are possible.

Summary

A process-driven approach to screening and scoring opportunities can dramatically increase the productivity of the fuzzy front-end in innovation. A firm can create and score several hundred ideas with a couple of person-days worth of effort. The objective of screening/scoring is to

quickly identify the opportunities that warrant further evaluation, typically 5 percent to 10 percent of the number of ideas you began with.

Given the tension between efficiency and accuracy in our filtering, we design innovation tournaments to run through multiple rounds. The first round needs to be extremely efficient like the example of the web-based Darwinator software we discussed. Innovation work-shops are fun and allow both, a further filtering as well as creating an atmosphere that supports the refinement of opportunities as well as the generation of opportunities in the future. Finally, a set of pre-specified criteria at the final filtering step corresponds to a check-list of what constitutes an exceptional opportunity worthy of further investment. Just as a pilot works through a check-list before taking his airplane to the runway for take-off, criteria such as the RWW list used by 3M ensure that you have checked everything you can check before moving the opportunity to the next level. At the time in the tournament as you start applying the RWW criteria, you have shifted your emphasis from efficient screening to an accurate evaluation.

In using the Darwinator with many executives from multiple companies, we have found that, with relatively little effort, a group can create and identify a set of outstanding opportunities. Fifty people can spend less than an hour brainstorming time (individually) and easily generate 500 ideas. Each person then rates some 200 ideas, which takes between an hour and two hours. An idea that makes it into the top 10 in this sort of innovation tournament consisting of 500 competitors is typically really good. It is thus easier and cheaper to create many ideas and pull good ones from that group than to start with a few ideas and try to improve those through development. As discussed in the previous Chapter OP (Identifying Opportunity), creating more opportunities will expand your choice set and lead to a better set of funded projects.

The result of a good opportunity screening process should be a set of promising, practical opportunities—the best in each category—that you then can move into careful financial evaluation.

Diagnosics

- Does the selection of opportunities in your organization follow more a filter logic (most opportunities are weeded out) or is it more like a funnel (whatever goes in will, maybe with some delays, come out at the other end)?
- Do you have a process in place that allows all employees in your organization to participate in the early phase of innovation tournaments?
- Do you have a set of criteria in your company to determine what kinds of innovations to seek and which ones to drop early in the process? Are these criteria widely known in the organization?
- Do you weed out 90 percent or more of your opportunities or might you benefit from expanding the set of opportunities considered for funding?
- Who in your organization votes on opportunities or acts as an advocate for moving opportunities forward? What group dynamics exist in this process? Is there a way to anonymously express opinions or make suggestions?
- Do you group opportunities so they are comparable, for example, by categorizing them according to their uncertainty levels?
- Have you organized innovation work-shops to support the generation and screening of new opportunities?

Chapter Notes

¹ VanGundy discusses the question of how many votes each participant should be endowed with. A.B. VanGundy Jr., *Techniques of Structured Problem Solving*, 2nd ed. (Van Nostrand Reinhold, 1988).

² VanGundy uses the term hot-spots and discusses how to handle them. A.B. VanGundy Jr., *Techniques of Structured Problem Solving*, 2nd ed. (Van Nostrand Reinhold, 1988).

³ The data is taken from the case study by Girotra et al. K. Girotra, C. Terwiesch, and K.T. Ulrich, “Drug Development at Merck Research Labs.” (Teaching Case at the *Wharton School*, 2004).

⁴ We are grateful to George Day for sharing these criteria with us. These criteria were also used as the basis for Exhibit RWW. G.S. Day and P.J.H. Schoemaker, *Peripheral Vision: Detecting the Weak Signals That Will Make or Break Your Company* (Cambridge: Harvard Business School Press, 2006).