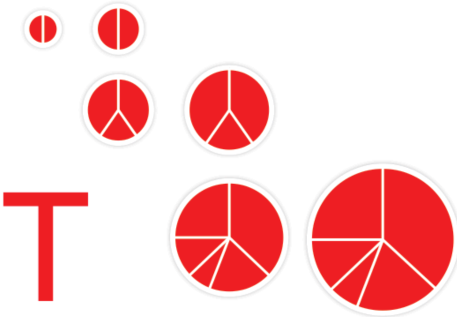
EQUITY FINGERPRINT



To dilute or not to dilute, that is the question.

Philip Baddeley

Philip Baddeley BA (Oxon)

After working for the venture capital firm, 3i, Philip founded Baddeley Associates in 1982. Baddeley Associates started by creating user guides for hardware and software technologies and evolved to become a change management consultancy. The company grew to 50 employees and was sold in 1987. It was an Active Equity Company; one where the founders, team and investors all shared in the value created.

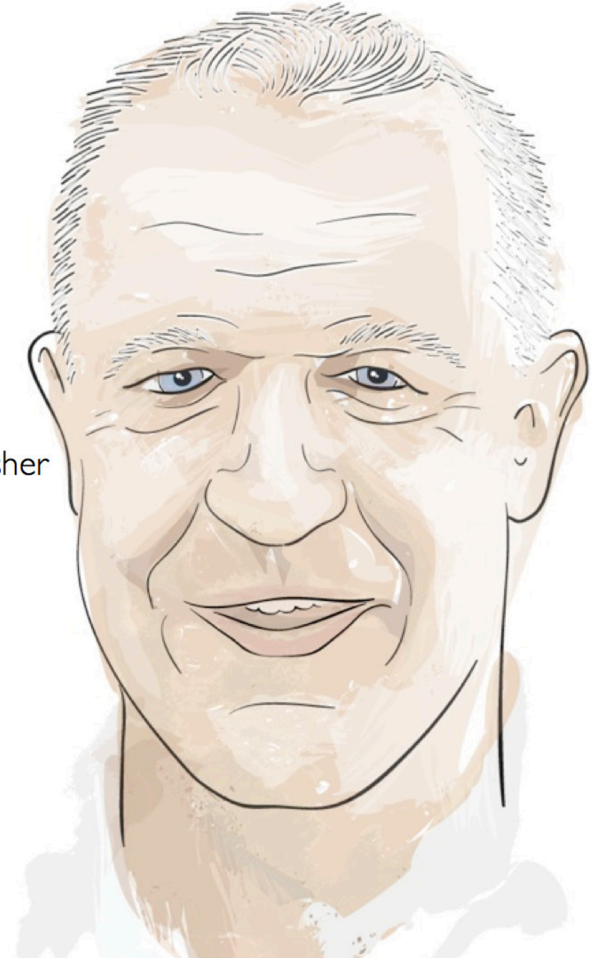
Philip subsequently embarked on a lifelong journey to help other entrepreneurs create successful businesses. Working with the Centre for Entrepreneurial Learning at the University of Cambridge, Philip created Yomp, now called Xing, a visual planning tool that allows students to learn about how businesses are created and grown. Now in its seventh year, Xing has been used by over 30,000 students from over 100 universities in the UK and beyond.

Philip created Equity Fingerprint to help entrepreneurs understand the use of equity to build technology companies (Active Equity Companies) and lectures on the Ignite programme at the Judge Business Schoool. Philip is also an angel investor, active blogger and is now publishing his first graphic novel, entitled *Charming Angels, Slaying Dragons*, aimed at 15-25 year-old budding entrepreneurs.

Philip Baddeley

Entrepreneur : Investor : Educator : Blogger : Publisher

www.equityfingerprint.com   www.cambridgecluster.com



Successful entrepreneurs tend to be coy about the ownership of their company and sale value. In contrast, those who have had a tough ride tend to be very eloquent and vociferous about the dreadful investors who have conspired and plotted their downfall. This guide is an attempt to present a balanced view. The harsh reality is that many more companies fail or struggle than succeed so there is plenty of noise whereas the diamonds tend to mask their brilliance. Surprisingly many of the most successful founders are disappointing public speakers and only shine in small groups.

Without exception they are reticent to discuss the ownership structure of their company and how it changed over time.
In Cambridge, quite often one of the conditions of sale is a complete lockdown on the total price and it can take years for the price to leak out through the cluster.
Academics can be very sensitive to publicity on their newfound wealth. This lack of transparency leads to lack of public role models and ill-informed debate.

I have looked at the equity structure of over two hundred companies in the Cambridge Cluster, worked for a VC, built and sold my own company which had multiple shareholders and rewarded all employees, watched many videos and read many papers and blogs on technology companies.

I have called this shareholding journey of each company its Equity Fingerprint. The Equity Fingerprint shows the change in ownership and change in value over time, effectively putting the Cap Table into pictures, for easier assimilation and discussion.

I hope that this guide is of use to all, for teaching, action and a basis for informed discussion. My dream is that all business plans will one day include an Equity Fingerprint.

Objectives

- Why use equity to grow?
- Why in multiple rounds?
- Why options for staff?
- Why increase valuation between rounds?
- Why include an Equity Fingerprint in your business plan?

Clusters are groups of businesses and activities based in the same geographical area. Examples are banking in London and New York; manufacturing in China in Shenzhen; diamonds in Antwerp; fashion in Milan and Paris; and films in Hollywood and Bollywood.

The term cluster was introduced and popularized by Michael Porter in The Competitive Advantage of Nations (1990).

A business cluster is a geographical location where enough resources and competences amass reach a critical threshold, giving it a key position in a given economic branch of activity, and with a decisive sustainable competitive advantage over other places, or even a world supremacy in that field (e.g. Silicon Valley and Hollywood). Technology clusters are usually based around universities such as Cambridge and Stanford.

It is important to identify the components of a cluster and list the key people and firms applicable to your start up.

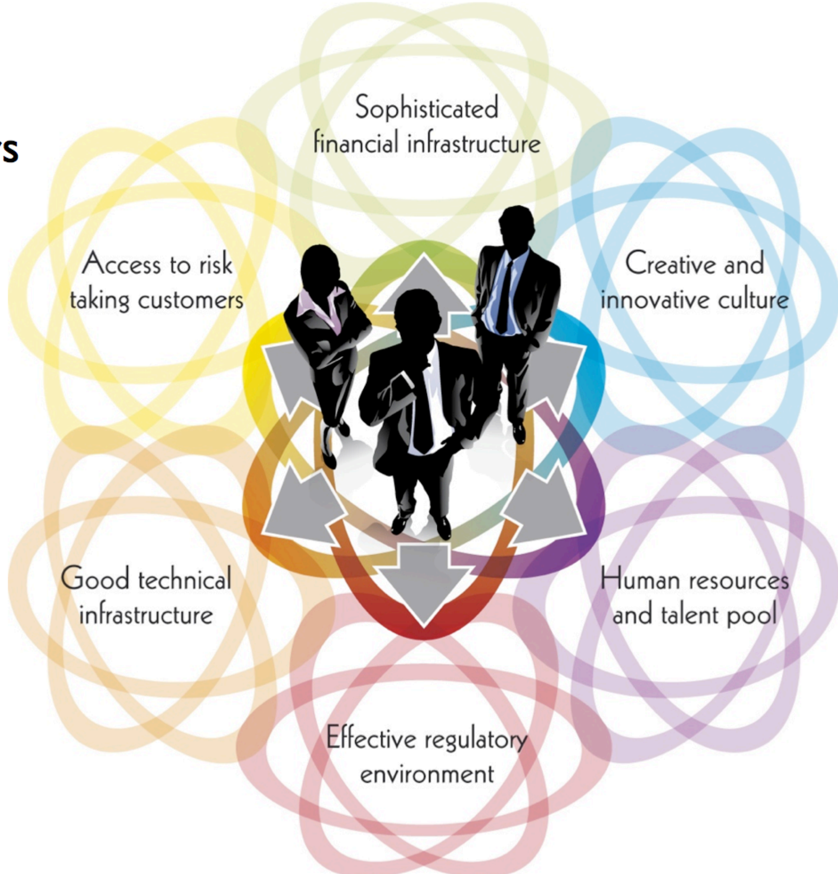
The cluster will have courses, incubators and network events.

Most importantly they will have people who have started businesses before, business angels, and now wish to advise and invest in new companies.

A cluster provides a great resource to the new entrepreneur and founding team and more that justifies the higher costs of rent and salaries.

There are three main sources of Active Equity Companies in a cluster: entrepreneurs and sneak outs, spinouts under the umbrella of the university and spinouts from product development consultancies. The first is by the far the biggest group and the entrepreneurs major donors to their university.

Clusters



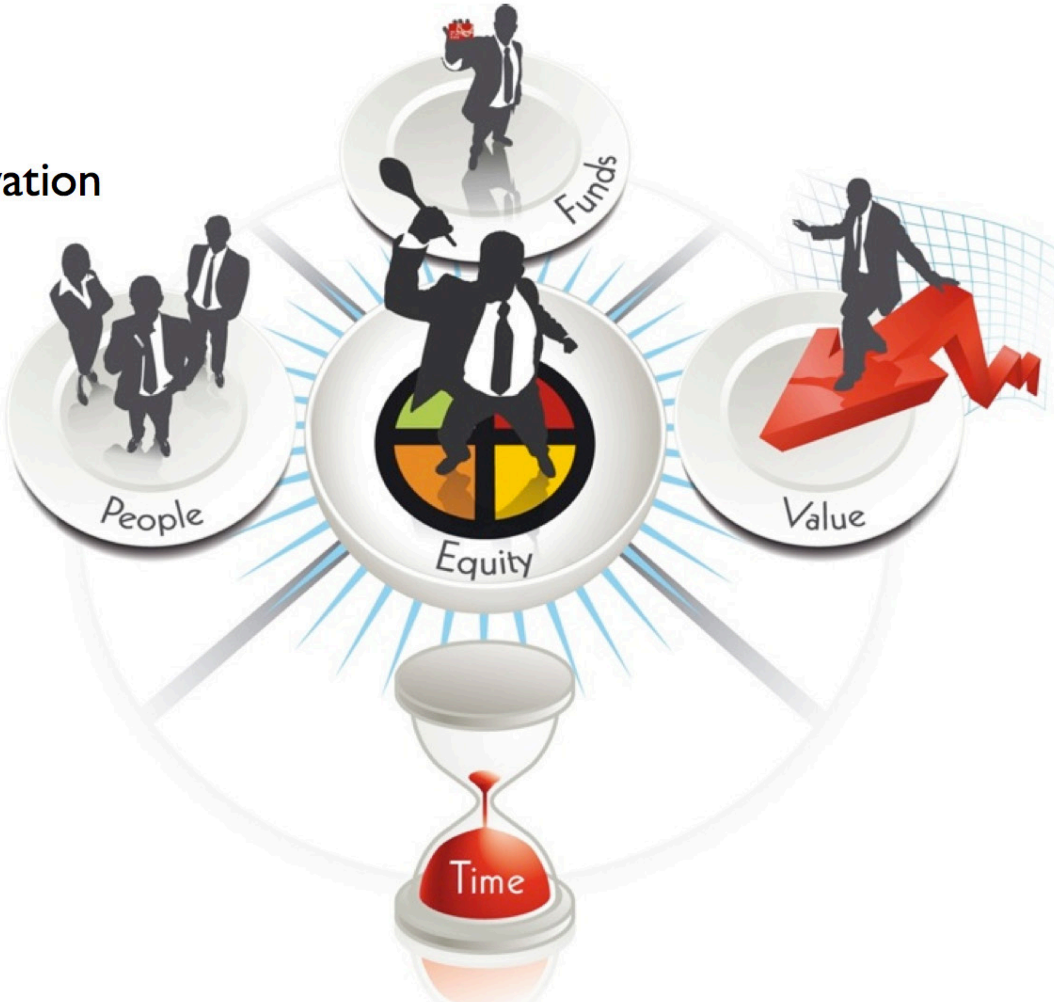
With thanks to Prof Arnoud De Meyer

There are many different ways of categorising businesses. Equity Fingerprint divides businesses into two types:

Passive Equity Companies where the equity structure stays the same for the life of the company. In >99% of companies, the shares are held by one or two families, usually one or two people. These are also called lifestyle companies, a rather patronising term, one I have never liked. Most entrepreneurs work incredibly hard and long hours to establish their company. The wealth created stays within the founding families. The wealth and control is passed down through the generations fragmenting amongst the descendants.

Active Equity Companies where there are more than two founders and the equity structure changes over time. the wealth created is usually crystallised within ten years and sometimes after a year or two. Investors and all employees share in the wealth created. Apart from money, the investors provide skills of building fast growing companies, support in the difficult times, help with pivoting and recruitment and introduction of professional management techniques. They are vital in the sale of the business. If the company falters, the investors can act to protect their investment. Active Equity Companies are only suitable for companies with an idea/product which can be scaled rapidly to reach a massive global market/customer base.

Motivation



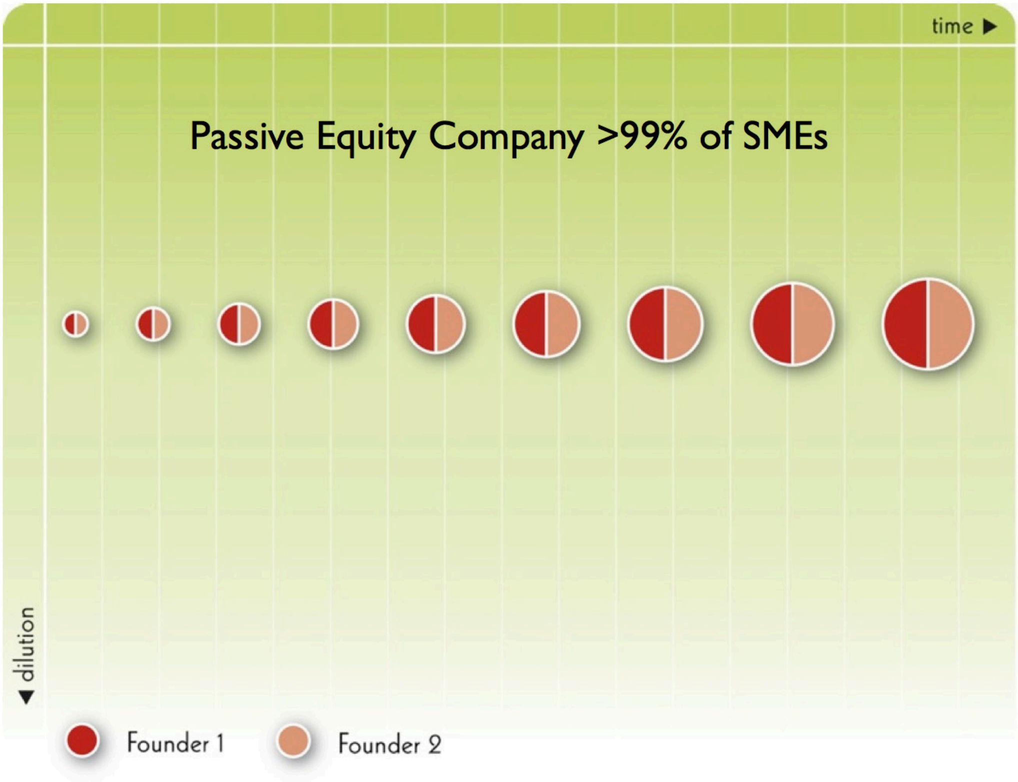
Business plan competitions are based on pitching to investors. This is a great teaching experience allowing entrepreneurs to identify their core business and practise selling. Feedback is given by experienced investors. After the competition, it is time to redraw the business plan and the equity journey and perhaps have more modest ambitions.

In an Active Equity Company technology company, we use equity to motivate and build a team, attract capital, build value dramatically, accelerate global growth and so stand a chance of launching and competing with the rapid change of technology markets.

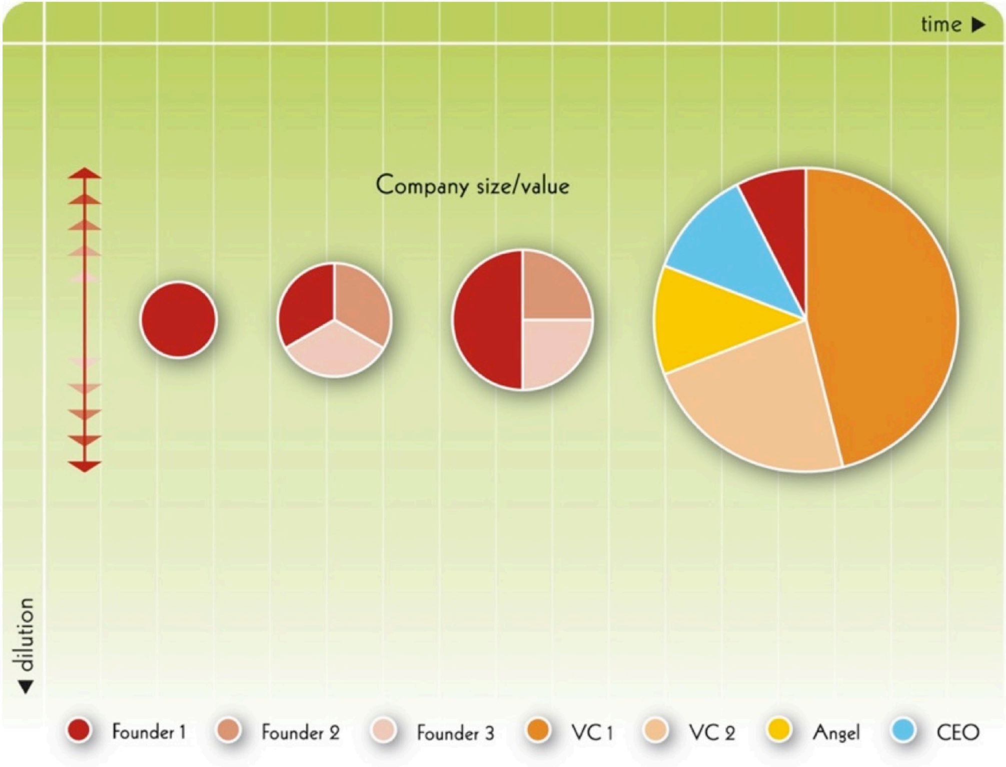
Investors use the phrase "when one person goes to the pay window, everyone goes". When it works everyone is happy but if events conspire against the company, for example the stock market crashes, then employees may find their options worthless. It is never easy being an entrepreneur and leading a team.

www.equityfingerprint.com
Equity Planner
You are here
Key
Start-up Line
Friends, family & fools
Venture Capital
Share Options
Dilution
Funding £
Key Funding £★
Lifestyle ♥
Free Holidays ✈
Small Company* Big share
When venturing into the world of entrepreneurship it is essential that you plan your goals early on. This doesn't just mean choosing your industry and product, but also your life goals. If you want more time to spend with your family and a minimum of stress, with no boss to answer to, then you really don't want to start a high-growth technology company!
*Bonzer nice train
Entrepreneur
Research
Grants £★
Bank £
Network ♥
Family ♥
Angel £
Contract
Prototype
Manufacturing
Milestone
VC £
Investors £
Customers £★
Cluster Junction
The Boardroom £
Export ✈
Leadership ♥
Staff £
Technology
Partnership ♥
Growth £★
FOR SALE
Back Seat
Cog
Small share*
Big Company
If you have a passion for both your product and your industry, a willingness to take advice, answer to investors and work ridiculous hours to achieve a business that can be sold for large amounts of money in a relatively short time, then our business plan resource can help you. It shows why entrepreneurs must keep raising the value of their companies and demonstrates how the entrepreneurs' journey differs from that of people working for large companies.
For more information visit:
www.equityfingerprint.com
*Bonanza small share
MIND THE GAP

The equity structure of a Passive Equity Company stays the same over time and the company's growth is constrained by the cash flow generated from operations and the vision, aptitude and energy of the founders and their family.



Active Equity Companies change their equity structures once or twice a year and, in the best of cases, grow rapidly as shown by the increasing size of the circles.



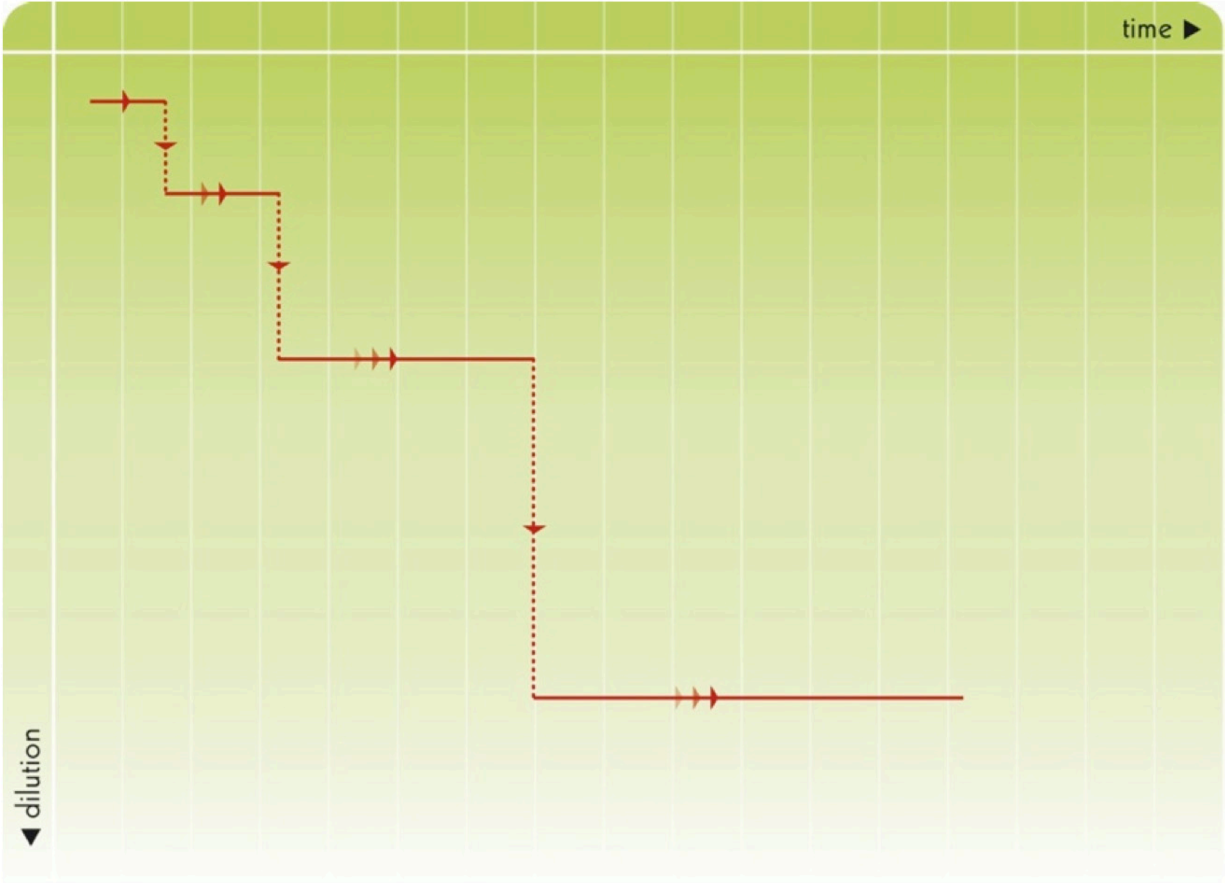
This is the basis of an Equity Fingerprint showing the change in equity structure over time. The horizontal axis is time. The vertical axis shows the percentage of equity held by the founding team which reduces in steps as new shareholders join the founders.

These can be:
a) key hires in the very early days
b) employee share option scheme
c) investors.

There are many different routes and I have looked at over two hundred companies in the Cambridge Cluster. The key finding or observation is that many try and few reach the heights but this applies in so many fields such as sport, politics, art and music and is no reason for not trying.

Being an entrepreneur, the key feature is the reduction in ownership of the company by the founders - known as dilution. That is why the key feature is this change. Others put the increasing value as the key feature but they are not entrepreneurs!

Dilution will always be in steps.


time
dilution

Combining the dilution of the founders with the value of the company at each round gives the Equity Fingerprint.

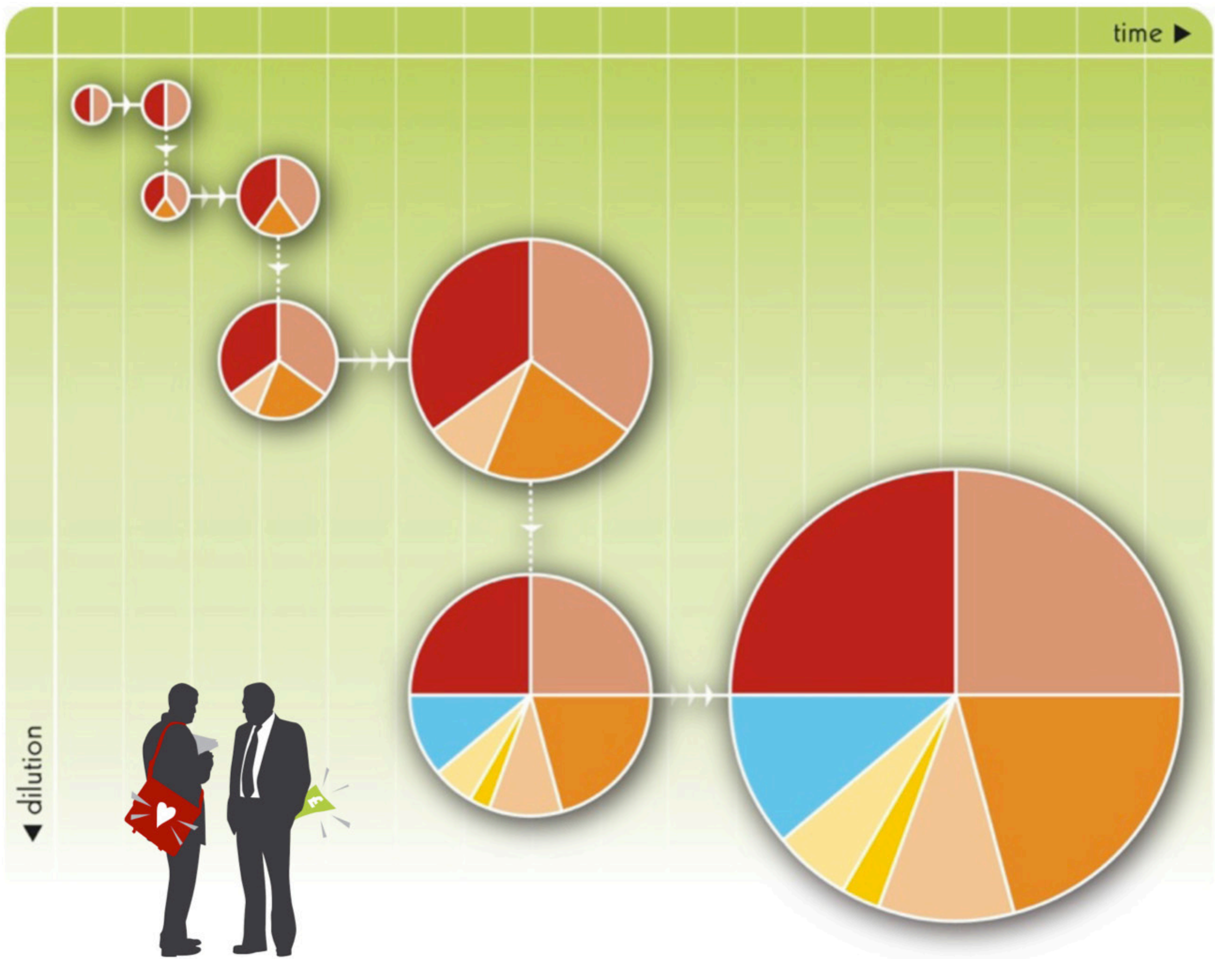
There are ten key points and many, many more that can be raised. There are no rules!

1) The division of equity between the founders can lead to many fraught discussions. The Equity Splitter is designed to give a framework for rational discussion of what can and should be a very emotional discussion. Weight is given to origin of idea, inspiration, perspiration, risk and responsibility. The team of founders means that it is unusual for one founder to have >50% of the equity. A benefit is that if four shareholders have 25% each, the sale of 20% to a group of investors means each founder is "only" diluted to 20%. If all the shares were owned by one person, the sale of even a tiny percentage of the company dramatically changes the ownership structure as the entrepreneur has a duty of care to the other shareholder. As with public companies, if no one owns a significant shareholding, the emphasis is on building the business not the navel gazing of the ownership. Look at the building of Vodafone using equity deals.

2) Founders leave or find other interests. It is best to make the share of founders vest - i.e. be allocated over time. If Founders leave retaining all their shares soon after the start, there can be a good chunk of the equity not working for the future of the business. One entrepreneur has described this is as Founders' Tax!

3) Only the next couple of hires will be offered a percentage of the company, be it one or two percent. It is important to then move onto a share option scheme where the emphasis is on the number of shares and not the percentage of the company. Some founders dangle the prospect of shares to employees and then put off the allocation in the hope of building value before the allocation. It is just that they are too busy building the company.

4) How far can and should you get with non-equity funding such as grants, winning business plan competitions and advances from customers?


time
dilution

5) Funding is raised from three main sources: Family, friends and fools; business angels and venture capitalists. The first two groups invest their own money and can be cavalier and more relaxed on due diligence. They can take a punt. Discussions on valuations are always fraught. The equity structure fragments and in each round there are a number of investors. Even VCs tend to invest with others. This is a very high risk game for everyone. By investing in groups it reduces the risk to each investor as they can invest in a number of companies. By reducing the risk, the investors are able to justify much higher valuations. This is important to the founders as it gives them a good chunk of the company which we know will be diluted in further rounds. These founders are mainly young and have great skills which have a market value. Managing the investors is also a great skill and a further burden on the founders. Usually the group of investors appoints one of them as Chair to channel information and and call on expertise. Good investors will help build great businesses.

6) At each new round, the founders will need to attract a new investor(s) to ensure that the round is priced at a premium. This is so important to reduce the dilution of the founders after the round. Attract enthusiastic investors who can add value to the new phase of the business.

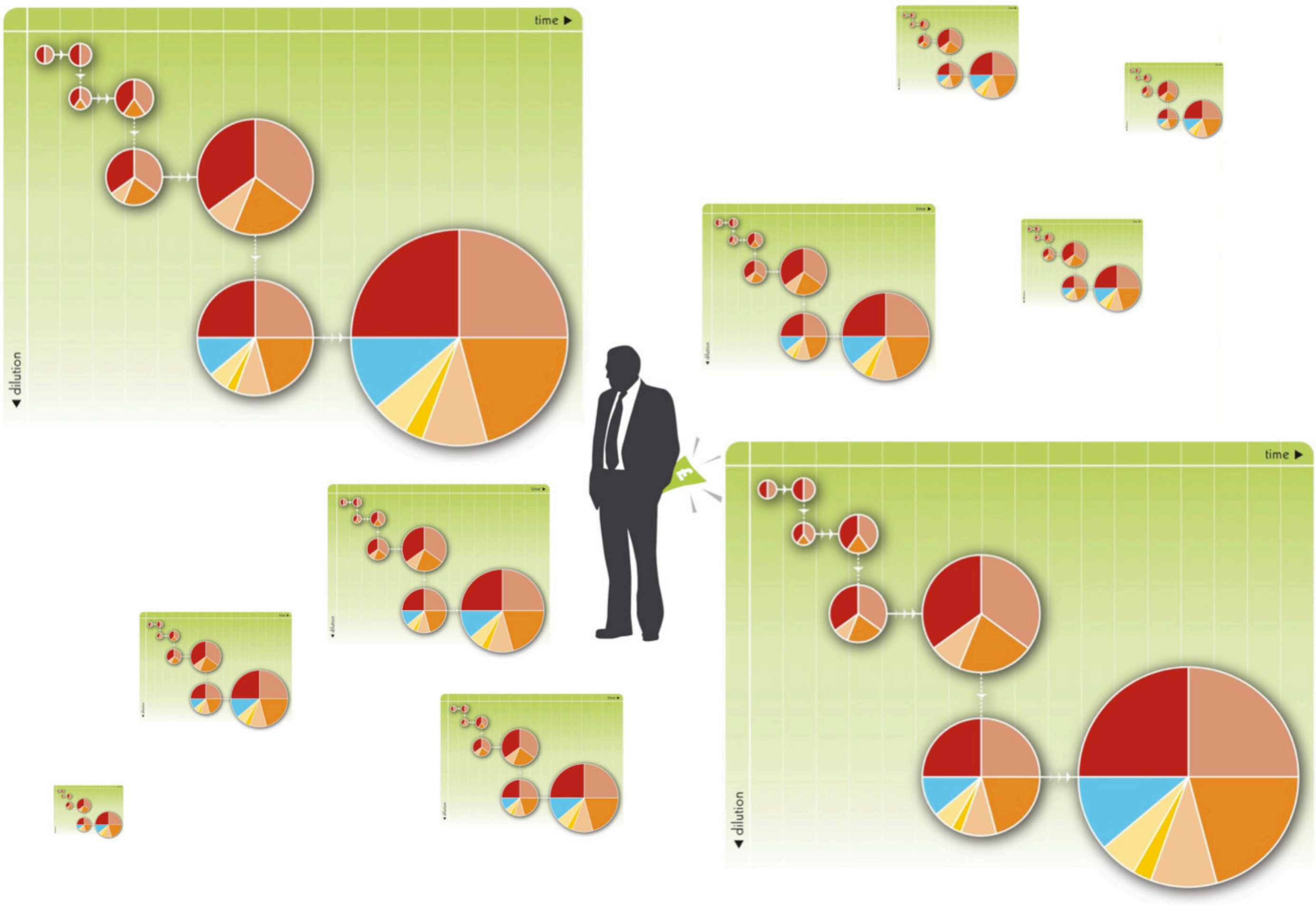
7) Go for A list investors who have a track record of adding value. Too many investors and VCs want to tag along for the ride.

8) Investors will require that the company is run properly and make checks before investment; known as due diligence. This all helps when it comes to a sale or flotation at a later stage. The emphasis is on building the business without funds being a constriction rather than funds being limited by cash flow but that does not mean profligacy!

9) All goes well if the company achieves exponential growth in value. If the company stutters then the worst can happen - a washout round - and the founders are left with little except for embittered stories to regale the unsuspecting. It become a sad tale.

10) The founders have one company in which they put all their energies. This is a rule!

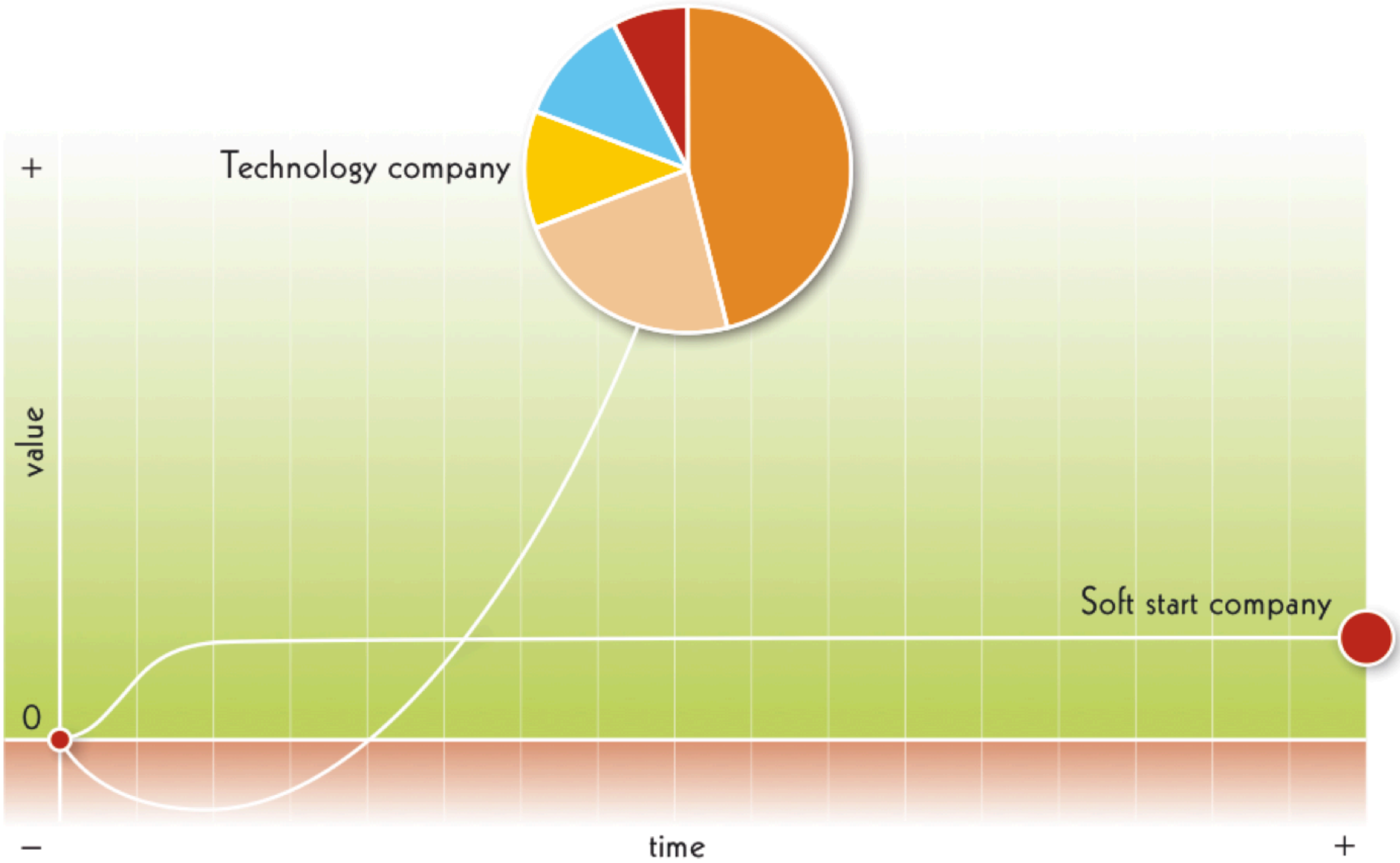
Investors will wish to spread their risk across a range of companies. This is good for the entrepreneurs as there is more experience to bring to the table. However investing in competing companies is not recommended and will lead to conflicts of interest.


time
dilution
time
dilution

Founders of Passive Equity Companies will work hard to generate cash to finance the survival and then the growth of the companies. Most of the companies will service a local niche and after a few years settle to a steady growth and start involving the next generation. Passing wealth and accountability down the generations is not easy nor is it easy for the founders to let go of the reigns but that is the subject of another guide!

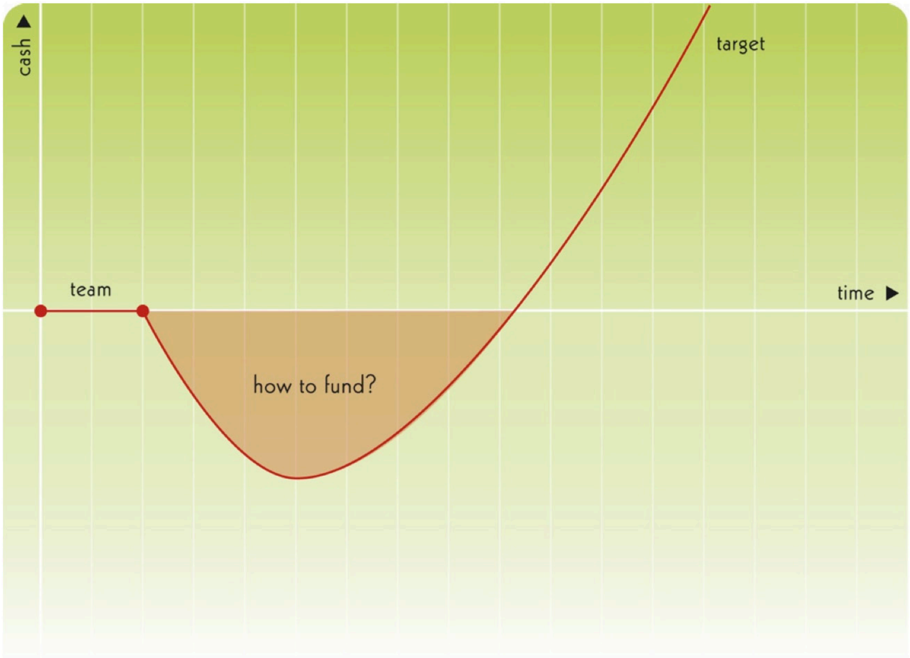
In contrast, technology companies will run at a loss whilst the product is brought to market and the structure put in place to meet with the expected global demand.

Raising money to spend money is not building a business. Bootstrapping is one way but not everyone wants to live on little or have a house full of workers. Building value each and every moment, every day, every week is demanding. Working 24/7 to start is tough on families and suits younger people better. If work is your passion then there is no imbalance to an obsession that is your business.



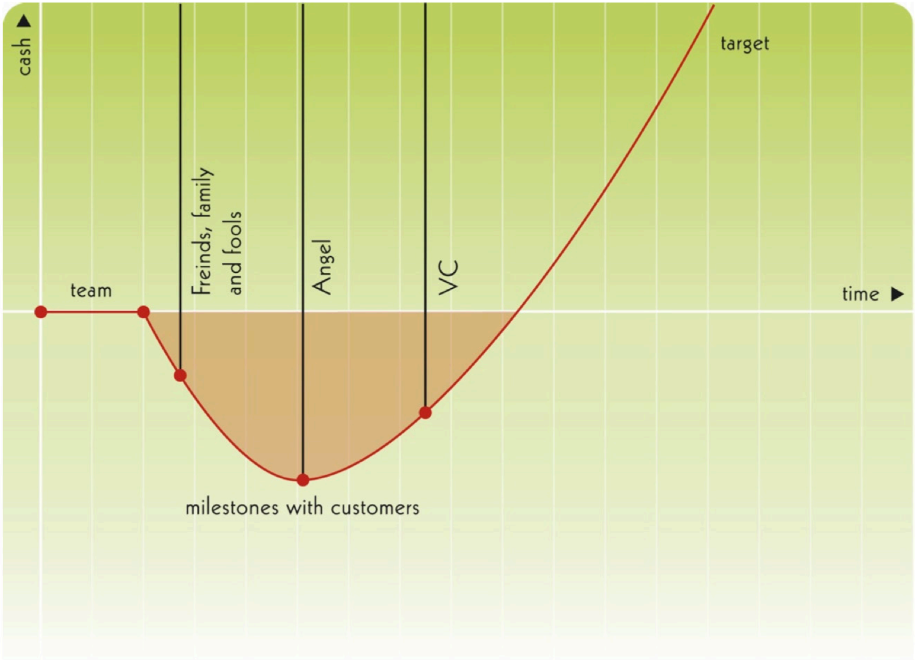
Technology company
Soft start company
+
value
0
–
time
+

The business plan will show a need for funding. Obviously all ways to reduce this need should be investigated.



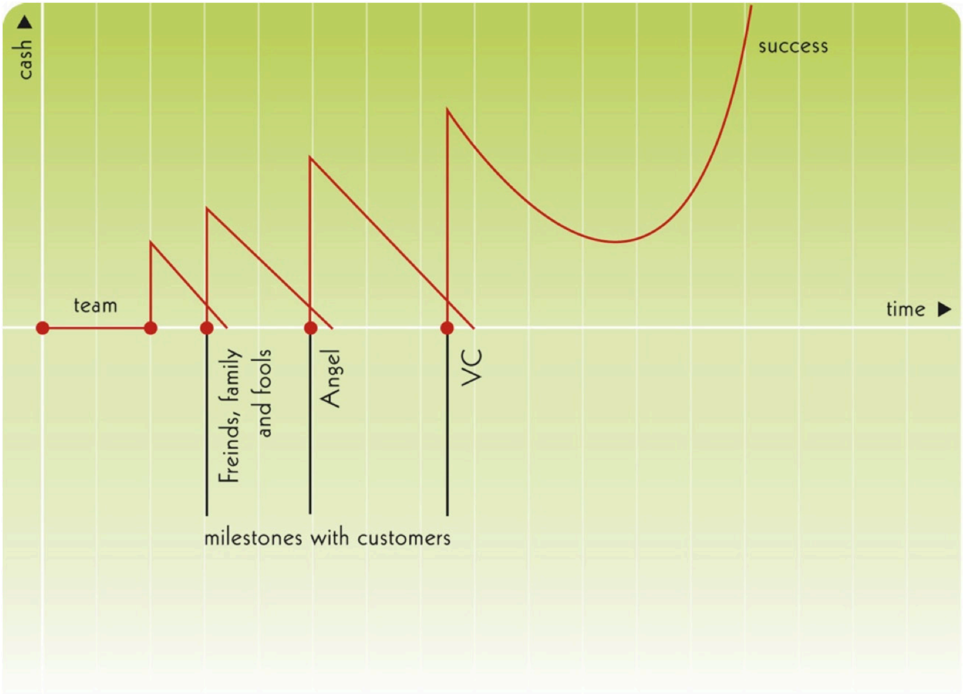
For illustration, the funding required will be split into rounds with each round appealing to different types of investors. In practice few companies follow this pattern. It is important to strive to achieve easily identifiable milestones which will allow the founders to justify much increased valuations at each round.

Remember, exponential growth in value is the best way to reduce dilution to the founders. In the old days, this was sales and margins, but in the technology world it is finding a metric which means you have discovered a massive global market. The number of users is one such metric.

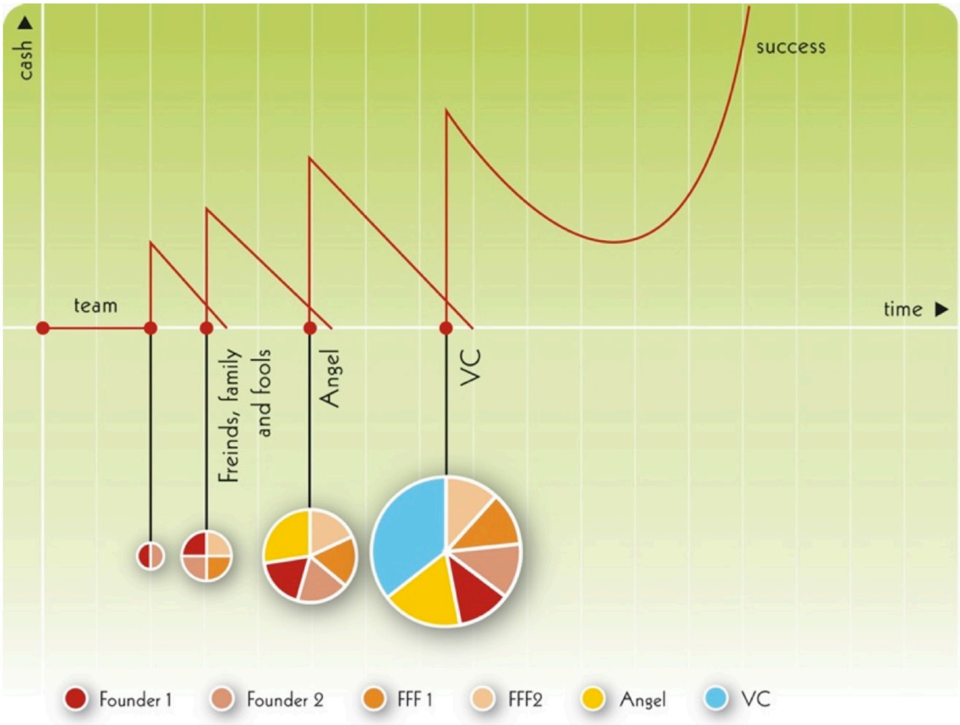


It is important that the rounds overlap. If there is too much of an overlap, you have raised funds too early and been too diluted. If there is no overlap, you are at the mercy of your investors - as they say, not a good place to be!

The usual rule is raise as much as you can because you never know when the market will change or you run into problems finishing the product or finding the market.



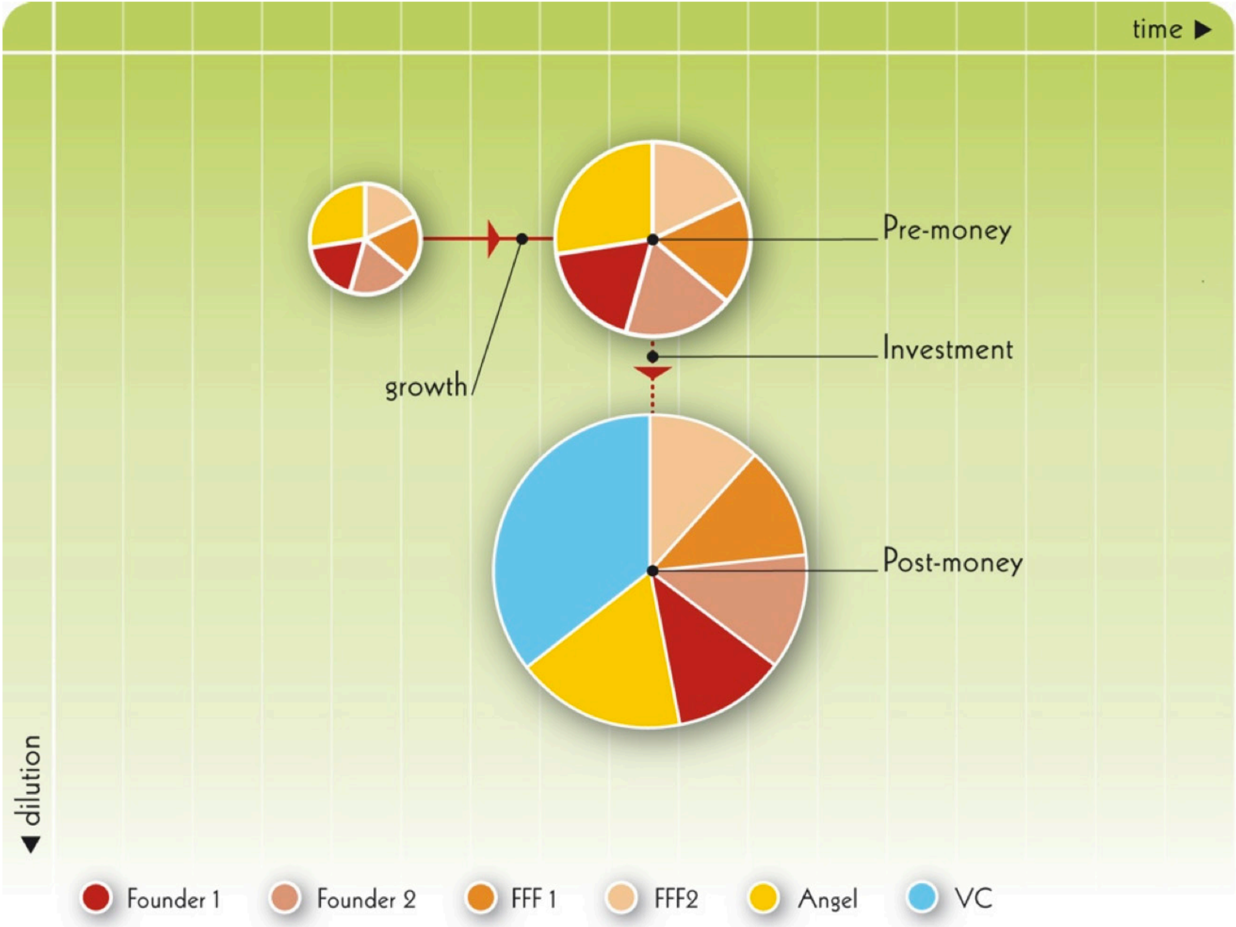
At each round, you get a changed equity structure and a much larger valuation, so the circle keeps growing.



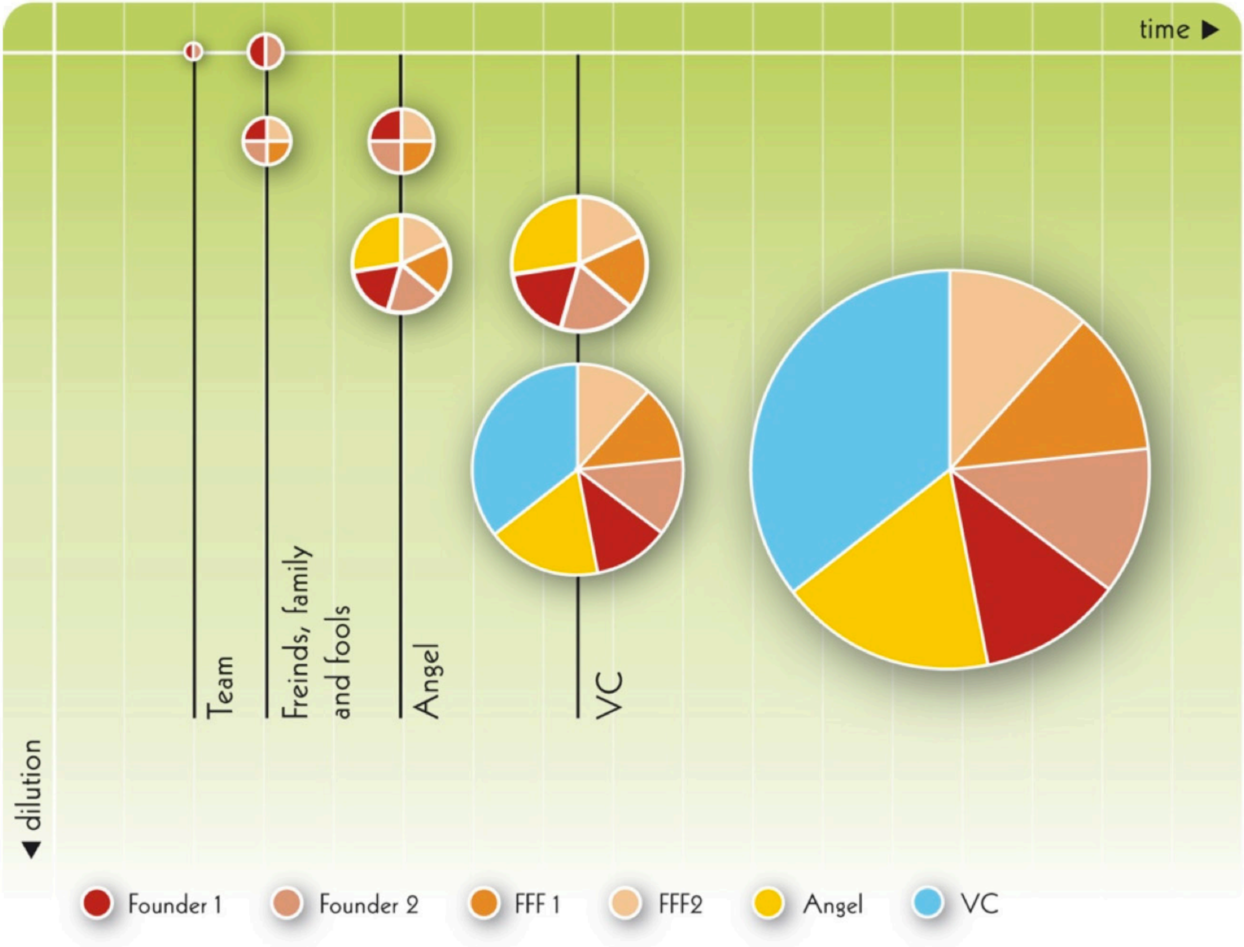
The value of the company is calculated from the price paid for each new share at each round multiplied by the number of shares in issue after the round, including options. This is the post-money valuation; take away the amount invested gives you the pre-money valuation.

So important when talking about valuations at a round - are we talking pre or post?

In the UK, companies have to file at Companies House their accounts and a list of shareholders. This allows you to work out the Equity Fingerprint. It is not straightforward as there no standard presentation and the dates of the list of shareholders does not always coincide with the end of the accounting period. Share option schemes are not always listed, nor the conversion rights of any loans. Some of the investors may have preferential rights on exit in certain circumstances. So it is not an exact science but gives the flavour. It is quite amazing how different all the EFs are in a cluster. The one consistency is that there is no norm.


time
dilution
growth
Pre-money
Investment
Post-money
Founder 1
Founder 2
FFF 1
FFF2
Angel
VC

After all the calculations, you can draw out the Equity Fingerprint and connect the lines. Study the Equity Fingerprints, talk to investors and then work out your dream.



time
dilution
Team
Freinds, family and fools
Angel
VC
Founder 1
Founder 2
FFF 1
FFF2
Angel
VC

An example of a Cap Table from which an Equity Fingerprint is drawn. Would you be happy with the projected growth in value? If higher, what happens to the dilution of the founders? If lower, is it worth the risk?

History of an investment

Shareholders	Share purchase price/£	£ invested	shares issued	share	Round 1	Round 2	Round 3	Round 4	Exit value
Founders share of co.			1,000,000	100%	80%	44%	28%	22%	£17,600,000
Seed investors	1	£250,000	250,000		20%	11%	7%	5%	£4,000,000
Series A investors	2	£2,000,000	1,000,000			44%	28%	22%	£17,600,000
Series B investors	3	£4,000,000	1,333,333				37%	29%	£23,200,000
Series C investors	4	£4,000,000	1,000,000					22%	£17,600,000
Total shares issued			4,583,333						
Money invested		£10,250,000							
Company value (investment)			n/a		£1,250,000	£4,500,000	£10,750,000	£18,333,333	
M&A value of company									£80,000,000
Investment multiples (exit value/value of company)					64	~18	~7	~4	

Explanation of columns

Shares issued	£ invested/share price in £
Share – Round 4	shows the percentage change in shareholdings with the investment rounds
Exit value	The amount the shareholders receive when the company is sold for £80 million

Explanation of rows

Company value (investment)	The total number of shares issued up to that round multiplied by the share price of that investment round
M&A value of the company	Value of the company when it is sold, in this case £80 million
Investment multiples	Exit value/value of company at an investment round

Laurence John, Amadeus Capital
Starting a technology company, page 38

Julie and I founded Baddeley Associates in 1982 to write and design computer manuals. The business pivoted into Change Management. By 1987 the team was fifty people and the stock market was at a then all-time high. "We could work for another ten years and not have the same offer" was one of the cries. The deal took five months to close.

By luck/judgement we had found some outstanding people but we never had a plan for the business until after the first six months or so. We needed to earn a living and Cambridge was buzzing producing new computers - Acorn, Sinclair, Torch etc. We decided to invite two people to be shareholders and then had a long meeting one evening to allocate the shares. It was a good deal for all four of us in the end.

With a pre-tax margin of over 20%, receiving 20% deposit with order, modest drawings by the directors and ten people working from home we were an early example of bootstrapping. We decided to sell equity to raise funds to give the company more gravitas. With a fantastic non-executive director we stormed ahead. The stock market was booming and people running public companies needed to make acquisitions. The offer was made and went through. A key component was the the due diligence already done by the investors and the management systems necessary. One condition was that everyone should put 5% of their winnings into a pot. This was allocated on the basis of salary and service and a fudge factor to reflect added value; not a tax efficient option structure. On 17 October 1987, the stock market crashed.

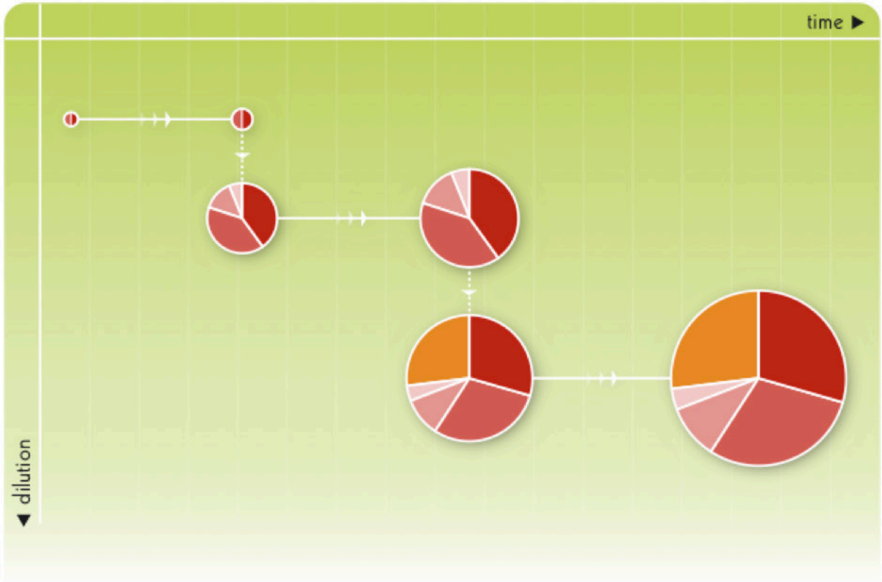
Did our kids miss out on taking over the business? Should we have raised funds when we did not need the cash? Could we have built the Company outside Cambridge with the then nascent cluster? Could we have found the pool of incredibly trained and able brains (who were not let lose on the customers) elsewhere?

Twenty five years later, twenty two people attended a celebration of the sale of Baddeley Associates, including the kids. So many memories and so much talent that has gone on to do so well - a bit like the Footlights at Cambridge but without the glare of the media. But the person who perhaps should have joined the shareholders at that evening meeting cancelled at the last moment - did that vindicate that difficult decision?

The hardest thing was bootstrapping - only those who have not done it recommend it. A house full of business and kids is not easy. The most difficult part was to sell the company at the top of the market. Too many hang on to the fall - it must be crushing to see the business going on as normal and the value disappearing.

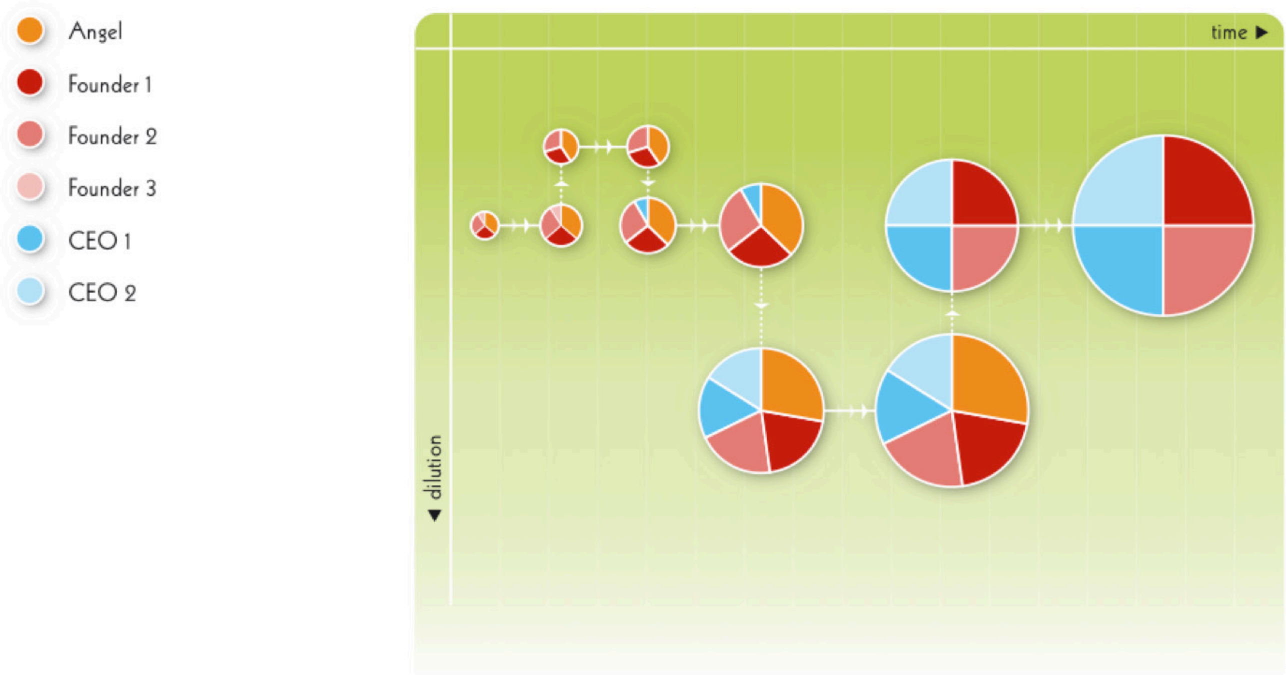
Baddeley Associates

- Founder 1
- Founder 2
- Founder 3
- Founder 4
- VC Funding



All the information is from published data as the sale price was never public. A Cambridge academic "retired" shortly afterwards. The gist of the story is that four people started the company, one left so instead of dilution we get consolidation, the company grew, a key person joined the equity - dilution - and then very sadly one of the founders passed away. This lead to consolidation again when the remaining shareholders purchases the shares which is usually the rule of the company. Then at the top of the market, the company was sold.

BioRobotics



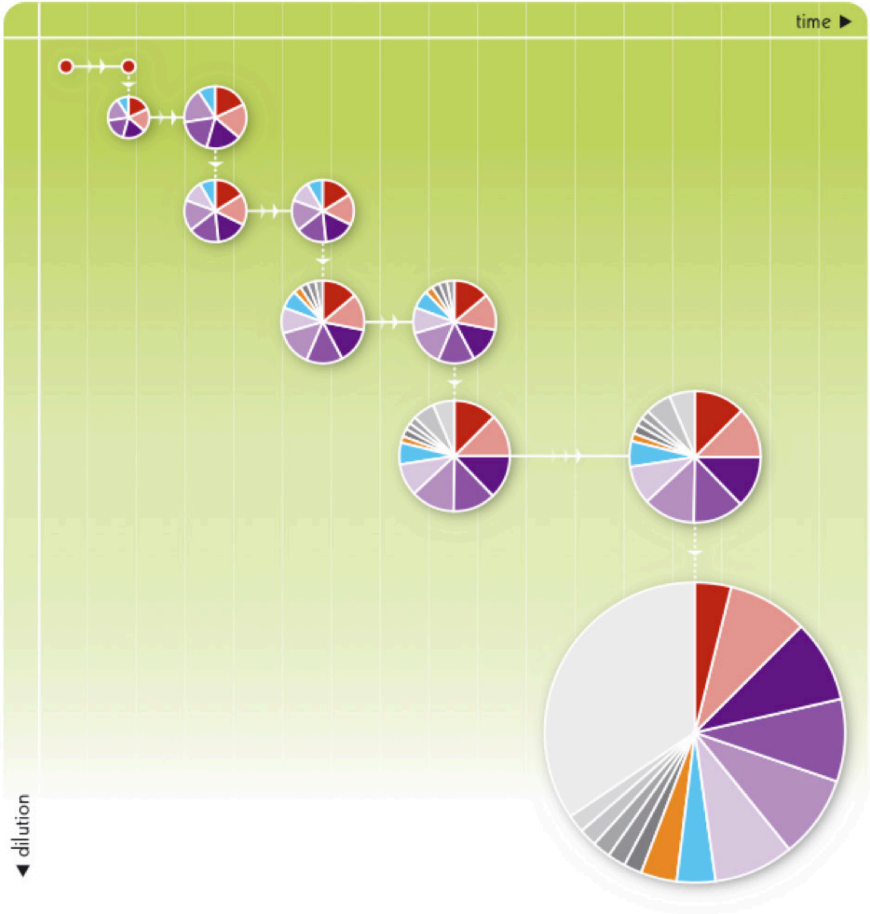
CSR is a spin-out of Cambridge Consultants and designed Bluetooth chips. Few outsiders were convinced that "fragile" Bluetooth had a great future at the time. The Equity Fingerprint is constructed from information published in the offer documents at the IPO.

Apparently the deal at the time offered to spin-outs from Cambridge Consultants was that the senior figures (three of the nine in this case) received twice as many shares as the juniors in the team. This is no kitchen table start up. With developed technology, CSR is formed with three VCs injecting a total of £6 million in three tranches. All goes well and then a series of further rounds are raised from industry and VCs before the final round of a bank investors for due diligence before flotation.

The equity starts fragmented and gets much more fragmented. It is a great success story. The disadvantage to the Cambridge Cluster of this kind of Equity Fingerprint is that no one person makes so much money that they are in the financial league of the best of Silicon Valley angels; in contrast to Autonomy. Watch what happens with the CSR spin-out, Neul.com.

Cambridge Silicon Radio

- Cambridge Consultants
- Founder 2
- 3i
- Amadeus
- Gilde
- Intel
- Share Options
- VC Funding
- Others



One of the great untold and unsung stories of Cambridge. The founders Mrs and Mrs Edwards donated millions to establish Murray Edwards College. What does a successful entrepreneur do in his spare time, fly his own helicopter?

One of the very sad sides of Geneva is that the company brought in as CEO and investor was one of the most successful serial growth managers of the Cambridge Cluster, Stephen Thomas. A very modest and unassuming person, he got "lucky" with the first company he joined and was given some shares. He used his winnings to invest in and manage two more successes, never getting involved with companies with fewer than ten people - he described the stage of startup to ten people as the mad stage! Then he drove the businesses upwards and onwards. He did admit with a glint in his eye that not many people could land a large contract with companies such as BT when working for a startup. Sadly he died in a tragic accident in Antarctica. But nothing should be taken away from Stephen Edwards, not only one of the best Cambridge Cluster entrepreneurs, but who decided once was enough!

Geneva Technology

Murray Edwards College
founded as New Hall

UNIVERSITY OF CAMBRIDGE

Conclusion

- Investors are seeking active equity companies with scaleable technology
- meeting a "Global sustainable under-served market need" Jack Lang
- able to build value dramatically
- thrive in clusters such as SV and CC
- grow with teams of people welded together with equity
- require syndicates of investors in multiple rounds
- have complex share structures (for SMEs)
- demand special entrepreneurs prepared to share.

Thanks to all in the Cambridge Cluster.

Dilution of ownership of the founders is a good idea in very few business. However technology companies are an exception - when we look at most technology companies that have grown rapidly and gone global we see that many shareholders have been involved. Do take time to watch The Social Network movie, which illustrates well the pains and joys of these journeys.

These ideas are based on my experience, studying hundreds of company accounts, watching videos, reading blogs and giving workshops in the UK, Australia and New Zealand.

With thanks to all in the Cambridge Cluster who have helped me on my journey.