imperial innovations

Imperial College London

Allocating founding equity in Imperial spinouts

By Imperial Innovations for Imperial College London staff

Introduction

This guide has been created for the founders of Imperial spinout companies. We define Imperial spinout companies as those based substantially on Intellectual Property (IP) developed at Imperial College London and created by Imperial staff.
At the point of company formation, a critical early question is how the initial equity will be distributed among the founders: how many shares does each founder get?

Depending on the route you have chosen under the Founders Choice® programme, you may be allocating as much as 95% of the initial equity in the company at foundation among the founders and incoming management. It is therefore essential that you get it right.

Imperial College London's policy on spinouts states that you, the founders, must agree between yourselves how best to divide the founding shares of a new company. Imperial Innovations will not tell you what to do. However, we have been involved in hundreds of company formations and we are happy to provide advice and guidance to Imperial spinout founders on this matter.

It is not a straightforward exercise to allocate founding equity in a new company among the founders. If you allow it to be, it can be an emotional and fractious process. It may seem daunting, but it should not be postponed until a late stage in the proceedings. One key reason for this is that it provides the first real test of whether company founders can work together.

For the purpose of this guide, whenever we refer to equity we mean it in the sense of the ownership of an interest in the company that is held by various parties in the form of shares. Though there are some finer definitions, such as incentive equity, ultimately we are always talking about a share interest in the business.

This guide provides some pointers and a logical framework that can form the basis of your discussions on allocating founding equity. Ultimately, however, you and your fellow founders must make these decisions, and everything we provide here is purely advisory. We hope that you find it useful.

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Appendices

Jargon buster

Some key terms

Equity
The ownership interest of a company that is held by various parties in the form of shares.

- **Incentive Equity or Sweat Equity**: Shares offered to key personnel to incentivise their work in the company. Incentive equity is usually drawn from an option pool that is reserved at the point of company formation to ensure that there are sufficient shares to provide an incentive. Alternatively such equity may be offered at formation in recognition of work already undertaken.

Options
Shares authorised for future issue in order to satisfy options granted to buy shares in the future at a pre-agreed price. Sometimes investors require that an option pool representing a significant percentage of the company be set aside to attract key employees.

Dilution
The decrease in existing shareholders' per centage equity ownership in the spinout when new shares are issued and existing shareholders do not purchase or receive any of the new shares.

Vesting
The process by which an individual (typically an employee of a company) becomes entitled to tranches of shares or options by virtue of the passage of time or achievement of agreed milestones. These options or shares may still be subject to claw-back provisions.

Grant of options
The process by which individuals are formally granted an option certificate that entitles them to exercise their options when certain conditions are met.

Exercise of options
The process of an individual exchanging their options for equity after certain conditions have been satisfied.

Option schemes
Option schemes are tax-efficient wrappers through which options can be granted to employees. An example is the Enteprise Management Incentive scheme in the UK.

Inventors
Inventors are individuals who are named on a patent as inventors. They are defined as those who have made an inventive step which led to the creation of the IP that is the subject of the patent.

Contributors
Contributors are those who have carried out work which has led to the invention of new IP. This could be, for example, a postdoc student who has run experiments based on the ideas of an inventor. They may be recognised in the patent filing, or they may be recognised as contributors through the provision of equity at company foundation.

Research Office
The Imperial College Research Office is the custodian of Imperial's IP policy. It is an office of the College.

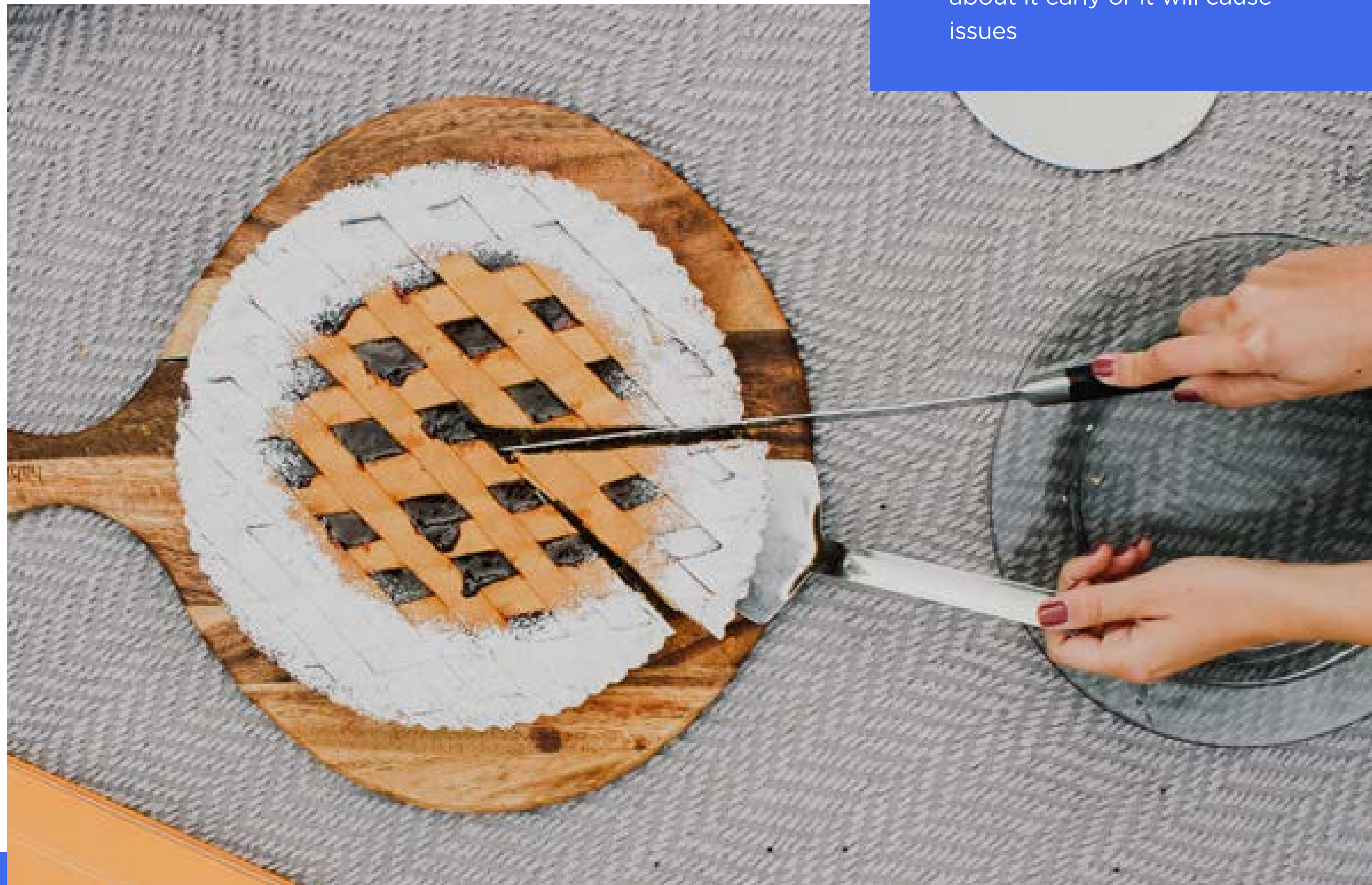
Allocating equity: a brief overview

Here is a highly simplified breakdown of the process of allocating founding equity:

- Decide who the founders are
- Decide how much equity each should receive
- Negotiate and make adjustments until agreement is reached

If these negotiations took as long to conduct as they did for you to read this summary, then this process would be extremely smooth and painless. Experience tells us this is rarely the case. Read on for a breakdown of things you should consider, and some advice on common stumbling blocks and how to overcome them.

Splitting the pie - deciding on who gets what amount of founding equity - is difficult. But make sure you think about it early or it will cause issues



How it can go wrong: an example

Throughout this guide we will emphasise the importance of founders having aligned goals. One way that misaligned goals commonly manifest themselves is in arguments over initial equity holdings – the below example is something of a worst-case scenario, but it demonstrates how founders who are misaligned and unwilling to compromise can cause problems to even the most promising of spinout opportunities.

When founders are not aligned: Case Study (*Babs Carryer - New Venturist*):
One researcher, I'll call her #1, was interested in forming a new venture based on her technology if it could be a sizable business, i.e., in excess of $5M a year in revenues. #1 had been in a start-up before, was the inventor behind the technology, and disclosed the invention properly to her institution. The other researcher (I'll call him #2) was in a different field and at a different academic institution. He desired only a lifestyle business, and he would be happy with a few contracts totalling several hundred thousand dollars a year. He also really wanted to be President, and he wanted control (at least 51%) of the equity of the company. #1 was skeptical that #2 could handle the roles and responsibilities of a majority share of a start-up and she suggested that they bring in a third party CEO to balance out the founders' equity. #2 thought that this proposal was a travesty to their professional and personal relationship and objected vehemently. I explained to them that the amount of stock allocated initially was a moot point moving forward as percentages were likely to change significantly as a result of investment and growth. In the future, ownership by the founders would be largely determined by on-going participation and specific roles. I encouraged them to think about the status of the company a year or two from now, when within the company there might be a CEO, product development people, and marketing and sales employees. As a full-time academic, what hope did #2 harbour to remain a majority shareholder of an on-going business with full-time employees?

The squabbling continued, to the effect of delaying the formation of the new company, putting grant applications on hold, and muddying the waters of responding to RFPs from potential customers. Most significantly, #1 became discouraged because she wanted partners to move this venture forward and never intended to be the sole driver behind the start-up.

This venture was ultimately compromised because the expectations and goals of #1 and #2 were not aligned. The founders waited to talk about equity, roles, and control. Had they communicated their goals early on they might able to resolve their issues. Lesson learned: Make sure that you discuss early and often your goals and strategies for the business. Make sure that the success of the business is what comes first, not someone's ego or personal ambitions. And put it in writing!

Shareholders in Imperial spinouts

Academic founders

Academic founders are the university employees that participate in the foundation of a spinout company. Their main motivation is often to see their research result in a product or service that will benefit society. Of course, it also helps if some money can also be made for all parties on the way.

Academic founders fall into two main categories

- Those who are happy to let their intellectual property go into a company with the hope that it will go on to benefit society, but who are uninterested in taking an active role and would prefer to focus on their academic duties.
- Active academic founders who take an active role in the progression of the company post-formation. Active academic founders tend to want a more hands-on role and care passionately about the company and its future direction (especially in the early, formative years). They also want to see all their extra effort recognized and rewarded in some way beyond their initial IP equity (as is entirely appropriate) and this is generally handled via share options.

The difference between these two types is important and will be considered when distributing equity.

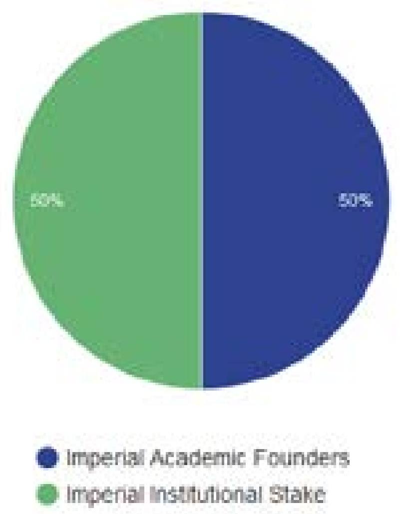
Imperial College Companies - stages

- **Founding.** The spinout is created as an investment-ready shell company, with IP, and it is ready to go. The founders are getting no money out of the company at this stage and it has no real value. It is not trading.
- **Spinout.** The company now has money, either from investors or from revenue. It is using this for research and to pay employees and consultants. Equity is likely to be the main form of remuneration for the founders.
- **Established company.** If you joined at this point you would get a market-appropriate salary and perhaps other benefits. It's less likely the company will fail, and if it does, your downside is limited to unemployment.

The institution

The founders' employer is due a share in an academic spinout. At Imperial College London, these institutional founding shares are held by Imperial Innovations.

Assuming, for convenience, a simple 50:50 equity split, the standard opening position at Imperial would appear as it does in the pie chart below. The percentage proportions used throughout this section are representative only (to simplify calculations) and do not necessarily indicate typical positions. The Founders Choice® section on our website explains available equity in more detail.



Third parties as founding shareholders

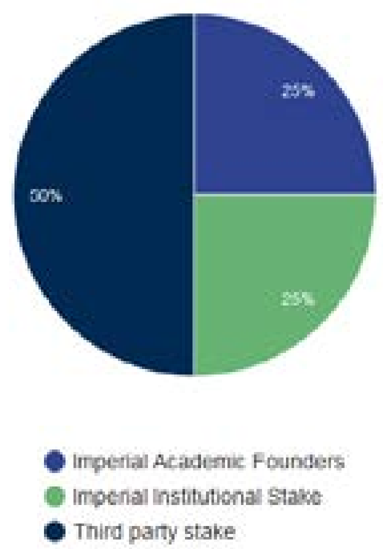
In addition to the founder and institution shareholdings, in any university spinout there may also be non-university employees involved (so-called third parties). Typically these are:

- Individuals who have contributed but are not employees of the College (usually co-inventors from other universities); and/or
- Research funders that are entitled to a share of founding equity through having funded some or all of the research that led to the origination of the founding IP.

These third parties are considered in greater depth here.

Inventors from other institutions

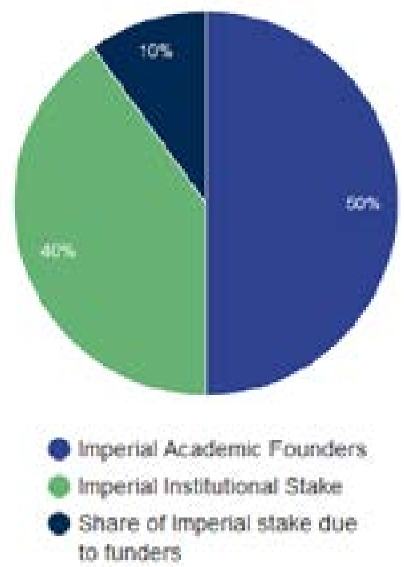
Third party inventors are generally (with a few international exceptions) dealt with via their employer's technology transfer office (TTO). Once Imperial Innovations becomes aware of a third party university being involved in a spinout, Innovations will contact them and involve the third party's TTO in any equity negotiations. The diagram used here assumes for simplicity that the third party contribution was equal to the Imperial founders' and Imperial's (50% to Imperial/Imperial founders, 50% to third party/third party founders). Note that the third party stake will then be divided between the third party and the inventors according to their local policy on sharing equity between the inventor and the institution. In situations where the third party operates a policy that would result in the third party founder taking a substantially different stake to the Imperial founder (either bigger or smaller) then this is expected to be resolved through an all-party meeting in which approaches are harmonized and an appropriate solution is reached.



Funders of research

At Imperial, when funders of research are due a share of IP commercialization proceeds, then equity is handled as follow:

Where funders are due a share of the College's stake in the business then Imperial Innovations (acting on behalf of the College) will negotiate the institutional stake (for the College and Innovations) with the founders in such a way that it takes into account the need to share part of the negotiated equity slice with funders. In effect, the College's obligation to share with the funder shields the founders from having to negotiate with third-party funders and their equity stakes. See the pie chart below.



Other things to note

At Imperial, if you take part in the Founder Driven route under the Founders Choice® programme, then different rules may apply and you should contact Imperial Innovations or the Imperial College Research Office if you wish to discuss this in more detail.

The guidance in this document is only for employees of Imperial College London, who, as founding inventors, wish to determine how to split their founding stake between themselves. It is not intended for third parties. It is intended to provide helpful guidance only and it is ultimately the responsibility of the founders to determine a fair equity split among themselves and sign-off to that effect.

Please note that issuing shares to incoming management, CEO, non-executives, advisors and even consultants later on is quite normal for start-ups and spin-outs. However, these individuals are rarely around at the time of incorporation (and even if they are it is often hard to argue that they contributed to the concept and founding IP behind the spin-out). As such, these individuals can and should be dealt with later by issuing options to purchase shares (see later section on options).

Who receives founding shares?

Just as there are as many different university coats of arms as there are universities, there is a vast range of schemes through which universities deal with inventors, founders and equity. Some may choose to reward minority inventors only through royalties under their local rewards to inventors scheme; some may choose to give them founding equity in spinouts to which they have contributed. There is no inherently correct way to go about this process, but as this guide focused on Imperial College London it is important to say that the approach taken here is as follows:

At Imperial College London, all inventors receive both founding equity in an Imperial spinout and a share of future licensing income, provided they are an inventor of the founding IP of the spinout. Founders' equity is generally issued as ordinary shares.

In all cases, Imperial receives equity in spinouts. This means that the inventing founders do not share in the College's institutional stake when it is realised (sold for cash) and the same is true in reverse. Imperial's institutional stake is held by Imperial Innovations, which shares a defined proportion of any realised money with Imperial and any third-party funders of research. Details of this are in Imperial's IP Policy.

The value of the equity when the initial founders agreement is made, before the company has any IP assets or capital, is negligible. Therefore, it is best to deal in percentages of founders' equity rather than absolute numbers of shares or 'units of monetary value'. Consequently, Imperial chooses to assign a per-share value of e.g. £0.001 (known as 'par value') per share. The value of these shares will rise once IP goes into the company and it raises finance or generates revenue. However, at the incorporation point the company is essentially valueless and each share is only worth fractions of a penny.

Agreeing the list of Imperial founders

This is one of the first key decisions for spinout founders at Imperial – who is on the list of founding academic shareholders?

There are three golden rules at Imperial to remember with regards to providing stakes to academic founders:

- All inventors of the IP being licensed to the spinout company must receive equity in the spinout (an inventor is anyone who has made an inventive contribution to the intellectual property).
- The founders may choose to reward other non-inventive contributors from Imperial (at their sole discretion) by giving up some of their equity.
- All inventors must agree on the final distribution of equity to all inventors and contributors.

Step one

List all inventors and creators of the intellectual property

As stated above, the initial list of such co-founders is relatively simple to generate at Imperial - it is everyone who is an inventor or creator of IP that is going into the company at formation (including patents, confidential know-how, design rights, copyright, code, database rights, trade marks etc.). An inventor is anyone who has made an inventive contribution to the intellectual property. You should agree this list with Imperial Innovations in advance of spin-out formation. All IP on the list must have been through the formal due diligence process with the Research Office of Imperial to confirm that such IP is owned by the College and to also check for any third party encumbrances (IP ownership rights belonging to others, veto rights, rights to share in commercialisation proceeds etc.).

Step two

Consider other contributors who you believe have been instrumental in getting to this stage.

Often spin-outs can involve others whose contribution was vital to generate the IP upon which the company is founded, but who are not technically inventors in the eyes of UK patent law or College policies. The definitions of inventors, authors and creators under UK intellectual property law are clearly defined terms. It is very important therefore to only name genuine inventors on IP filings, as the IP can be invalidated later if it is determined that people who were not inventive were listed as inventors. Co-authors on papers are not necessarily inventors. As such, sometimes others who you feel were important during the research phase may still not be eligible to be listed as an inventor as they were not involved in coming up with an actual 'inventive step' (e.g. being able to put their name to one of the claims in a patent). For example:

- The academic supervisor who suggested a line of novel research for you but 'left you to it' (providing occasional advice on the way) and never came up with any of the actual invention; or
- The junior researcher, post-doc, PhD student or lab technician (etc.) who 'turned the handle' and carried out much of the experimental work, but never devised the idea, the experimental protocols or interpreted the results (and therefore did not come up with any inventive step); or
- An academic colleague, staff member or student who provided valuable advice and/or support throughout the research phase (without inventing anything) and/or whose association with the company at foundation would add considerable value

Imperial recognises that the founding team of inventors may wish to reward these types of individuals for their contribution/association with the new company by issuing them with founding equity in the spin-out. The mechanism for doing so is that bona fide inventors must sacrifice some of their individual shareholding to give to the individual who is known as a contributor. This can be done in several ways:

- A majority inventor (or inventors) with a large number of shares give up some of their shareholding to the non-inventive contributor; or
- All inventors give up a proportional number of their shares on a pro rata basis in order to provide a block of shares to the contributor

The founders may agree upon any mechanism as long as all are in agreement about the inclusion of contributors on the list of Imperial academic founders.

Agreeing how to divide equity between Imperial founders

Once you have listed everyone who is due shares in the company, you must assign each individual a portion of the shares. At this point, you should not try to retain shares for future management as they will be incentivised through share options (see later). As such, you are dividing equity between everyone who is on the IP list at company launch (including any contributors identified) and the total allocation should equal 100% of the total available founders' equity.

Unfortunately, there is no scientific formula for allocating such founders' shares. At such an early stage it can be hard to assess the ultimate value and contribution of each team member. Also, since the company has not completed any meaningful financing, the team is lacking an arm's length assessment of the value of the company or its team.

As with most things, there are philosophical differences in the approach to apportioning founder equity. One camp believes that founder equity should never be evenly split because it is unlikely to reflect reality and can result in stalemates, which can kill a company quickly. The other camp believes that fairness should prevail and that, if an even split seems fair to all concerned, then it's probably appropriate. You will need to decide what is best for your group and come to a common understanding.

Things to take into account before splitting the pie

Once founders' equity has been issued, it can be difficult to get it back or to reallocate it due to emotional, legal and tax reasons. You should therefore think carefully and spend time getting the process right.

Communicate well with all stakeholders at all stages of the discussion - allowing resentment to fester by keeping the discussions to a limited circle will only backfire later. At the same time, do not adopt a polarised position in relation to how the shares are split. You may need to shift your position to accommodate others and you don't want the company to fall apart over small movements in shareholdings.

This is especially true for academic founders who plan to take an active, engaged and entrepreneurial role in the business going forward, as there will be an opportunity to earn more shares through the option scheme.

Paul Graham, founder of YCombinator, wrote an influential essay titled '18 mistakes that kill startups'. Particularly relevant to discussions on splitting equity are the following:

- Obstinacy
- Slowness to launch
- Fights between founders

These are recognised problems that affect new companies, so it is worth taking steps to avoid them affecting yours. You can read Paul Graham's essay in full, here: **http://paulgraham.com/startupmistakes.html**

A note on offering founding equity to advisers

As well as contributors to intellectual property development, we have found from experience that many Imperial spinout founders have felt it correct to offer founding equity to friendly and helpful advisers to the business in its early stages. As with all other decisions to be made in this process, this is one the founders must make between them. We have found that while lots of advisers are keen to offer support in the early stages, it is rare that they stick around for the long haul.

That's not to suggest that you should never offer equity to those who offer you help in the early stages, but remember: by offering founding equity you are effectively making the recipient a co-founder. Will they stick around? Founding equity is valuable and you should consider it very carefully.

Suggested approach - start with inventive contribution

While there is no formula, or one-size-fits-all approach, there are a number of potential approaches that could be considered, including splitting shares equally between the founders. We would generally advise against this except when there are a limited number of founders (two or three) and they have all been involved equally in the work to date.

We would suggest that you take the approach outlined overleaf - we have found this effective in the past for Imperial Inventors. Of course, the key bit of advice is that this is entirely up to you.

> **Individuals don't build great companies. Teams do.**
>
> **Mark Suster, General Partner - GRP Partner**

Our suggested approach

Stage one

Allocate the shares to all inventors according to inventive contribution
This is the most commonly used and recommended approach at Imperial and we strongly advise starting with it before you consider other factors.

A solid intellectual property base creates a high barrier to competitors and can give a fledgling spinout company credibility as well as a sound competitive advantage. Because of the importance of the IP base, it makes sense to incentivise those founders in the best position to contribute to the onward development of the IP. As such, we believe that inventive contribution is a sound basis on which to allocate equity at the start of the process.

Stage two

Allocate any shares to non-inventive contributors
Once you have allocated the equity according to inventive contribution, now agree among the founders whether you wish to give up - individually or as a group - any of your shares to the non-inventive contributors that you have previously identified. Allocate the shares at this point so that you have a full list of all founding Imperial shareholders.

Stage three

Make any further adjustments that all shareholders agree are appropriate
You now need to decide if you wish to make any further adjustments. If so, these should be made taking into account additional contributions that are above and beyond the purely inventive ones. We have given some examples of factors you may wish to consider in appendix one.

These can be used to adjust each individual's shareholding if required, and where the founding group agree it to be appropriate. These adjustments are not necessary if you believe that a fair split of equity has already been achieved.

Stage four

Create an option pool and issue options
After you have allocated shares for past contribution, you should consider anticipated future contributions and plan to reward those through share options.

Options over future shares (often called incentive equity). are issued under a vesting plan to certain named individuals to recognise the anticipated future contributions from them. These could be the academic entrepreneurs or future management - though in the case of future management these individuals may not be identified at this stage.

Equity vs control

Top tips for splitting equity

- Founding equity can be very tax efficient and valuable. However, it is better to have a small share of something than a large share of nothing when you cannot all agree. At the same time, you need to look at your total remuneration from the spinout - are you also getting consultancy income, a share of licence fees and royalties, a salary or other perks?
- Though incentive equity options that go on to issue will result in share ownership moving, the granting of these options should come from the company and not the founders. The company board should decide whether vesting thresholds have been met.
- Splitting founders' equity is not a trivial matter, and while confrontation can be uncomfortable, you should not dodge it. Agree quickly and write it down. If you cannot get through this negotiation then it may signal trouble ahead.
- Founding teams that allocate the founders' equity fairly stay together more than those where one founder gets a better deal. This is as much about respect as it is about money. A fair split does not always mean equal - only you as a group of founders can decide what is fair.

"

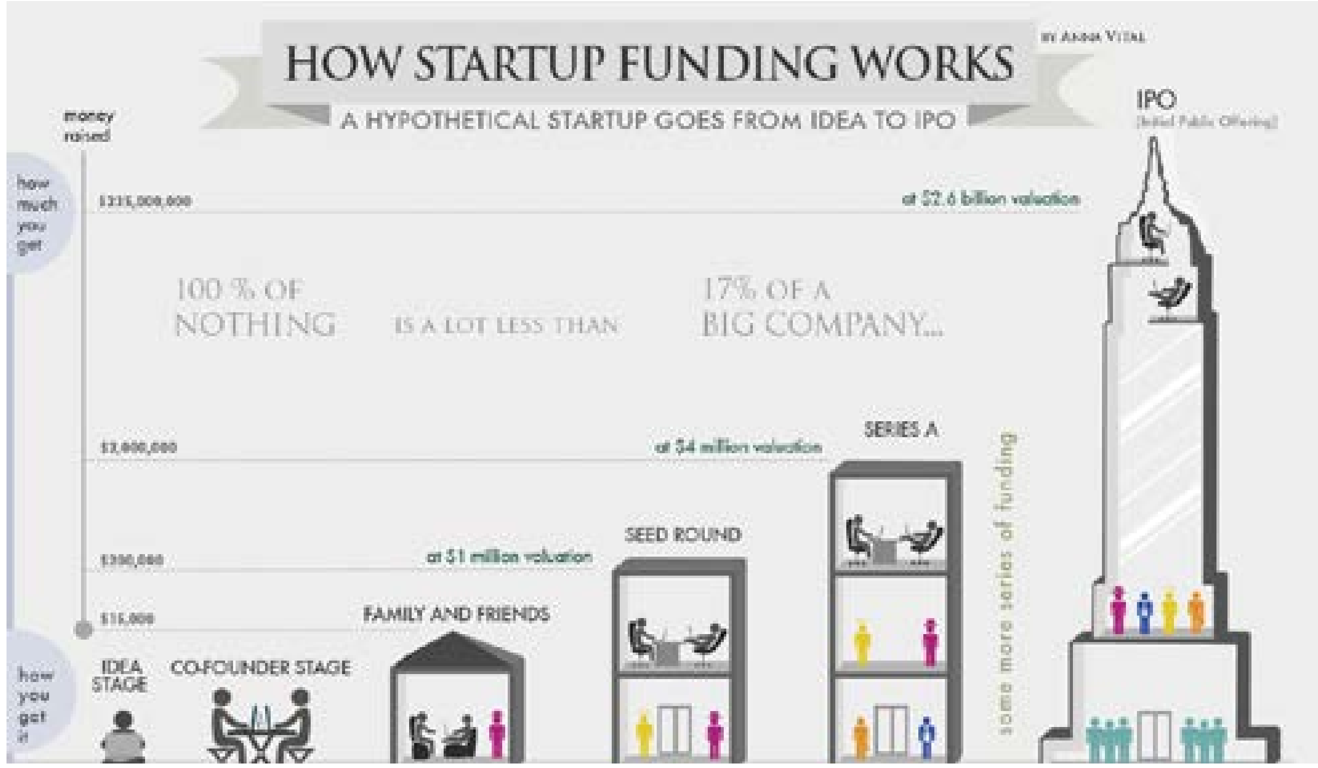
Chase the vision, not the money; the money will end up following you

Tony Hsieh, CEO - Zappos

One key matter should first be dispensed with. Founders' equity should never be allocated based upon how the company should be controlled or managed. You will instead be putting in place a separate agreement that specifies how important decisions get made. This Shareholders' Agreement will also contain various rights and clauses to ensure the good governance of the company. The **Venture Support Unit** at Imperial Innovations can provide you with more advice on what a shareholders' agreement is and what it should contain. You can find more information in our **Imperial College spin-out guide**.

Your shareholding is likely to reduce as a percentage due to dilution arising from incoming investment. However, its value should grow over time. The diagram overleaf titled 'How spinout funding works' demonstrates this principle.

In addition, do not forget that all inventors at Imperial must sign up to the Memorandum of Understanding (a document that, among other things, sets out the founders respective equity stakes) so everyone needs to be on board with the proposed arrangement and not side-lined or excluded from discussions.



Infographic created by Anna Vital for FundersandFounders.com. Further information at **http://anna.vc** *and* **http://www.adioma.com**

Dilution of founding equity vs. company value

The ideal outcome for a company founder would be that they start with as much founding equity as possible and are able to retain their holding until the company is sold. In most cases, acheiving this outcome would require one of two things: either the company can self-finance and requires no employees or outside influence; or the company chooses to limit its growth potential in order to avoid the need for outside funding.

In most cases, and especially for high-technology businesses founded at universities, outside funding is essential to growth and product development. Share dilution can also be an outcome of offering options or incentive equity to valuable employees. The idea, then, is that you should carefully exchange early equity for the funding and skills your company needs to meet its potential. Though your stake in the company will diminish, the value of your stake will increase as the company develops its products and markets and becomes self-sustaining or profitable.

Does this mean that founding equity does not matter? Of course not. Founding equity is an essential point for any founder or group of founders. But you should bear in mind that having a very large stake in a company that is essentially worth nothing apart from its potential is probably inferior to having a more modest stake in a company that is worth tens or hundreds of millions of pounds.

Further reading:
https://techcrunch.com/2011/10/13/understanding-how-dilution-affects-you-at-a-startup/

Founding shares vs future involvement - options

In addition to allocating equity based on inventive contributions and the other factors considered in our suggested approach, founders should objectively discuss their past and anticipated future contributions to the business. Past contributions might include intellectual property, know-how and so-called sweat equity in the form of time spent helping to build the company. Future contributions are almost always going to be in the form of services such as employment, directorships, consulting and activities in helping the company progress (pitching, fund raising and so on).

Finally, don't allow cash to confuse the issue. If an academic founder or entrepreneur wishes to put their own money into the business then they should be first discussing the merits/risks associated with such an investment with the Imperial Innovations VSU and the founders' personal legal representatives. If the founder still wishes to proceed then such cash investment is treated as an arms-length investment and the founder is treated as an investor purchasing shares at the next stage – only after all the founding shares and options have been issued and IP licensing has occurred. Do not allow the fact that you may be investing to interfere with the process of first issuing shares based on the above factors – de-couple the two issues in your mind.

Ideas are commodity. Execution of them is not.

Michael Dell, Chairman & CEO - Dell

Incentive equity can help ensure everyone is pulling in the same direction

Incentive equity: options and vesting plans

For every successful company there are hundreds of thousands of good ideas that didn't make it. Even considering factors other than the quality of ideas, there are countless great technologies that failed because the company responsible didn't execute their plan well. Execution is of paramount importance to start-up companies and rewarding those able to provide the skills needed for it is an important consideration. Options are one way of incentivising and rewarding those who can help the company execute on its strategy and achieve its planned milestones.

In university spinouts, frequently the primary driver for the successful execution of a plan is the active academic founder. Unlike passive academic founders, the active, more entrepreneurial, academic founder takes on much greater involvement in the business. They will have contributed intellectual property or know-how in the early stages, but once the company is formed they become very hands-on. They dive in and look at potential markets and customers, talk to mentors and advisers, pitch to investors and generally act as an energy source to drive the company forward in its early stages.

Active academic entrepreneurs should be incentivised and rewarded for this important work. Options are therefore an important consideration. Consider a spinout in which three founders receive an equal share of equity. One founder is keen to be deeply involved in the company and is willing to spend a lot of time on it doing valuable work. Without an option pool, they would gain nothing from this extra effort compared to their fellow co-founders (who, in this example, are not as involved).

Theory is splendid but until put into practice, it is valueless

James Cash Penney - J.C. Penney founder

What kind of founder do you want to be? Whatever you decide, stick with that definition with absolute and unapologetic confidence.

Jessica Mah, Indinero

Why use share options?

- To attract and retain key employees for the company
- To incentivise founders to remain with the company over a critical period
- To provide benefits with modest initial outlay for the company – useful for spinouts

An option pool allows extra incentive shares to be granted to founders in the future who put in this extra work. Note that options are very useful way to incentivise and reward future achievement for anyone executing and building value in the spin-out including new management and future employees. The terms and rules of the scheme will be generally applicable to everyone you decide to grant options to.

A share option granted to someone gives them the right at a future date to acquire a set number of shares in the company. This may be triggered (or the shares vested) by a certain event, for example, a sale or takeover of the company or they may be part of a vesting plan in which the shares are given out over a defined period or according to the achievement of certain targets to recognise the founders' continuing contribution to the company. Until the vesting condition is triggered the options have no rights over shares, and if the individual leaves the company before the options are vested, they lose those options. After the options have vested then the options now belong to the individual and they 'exercise' or convert those options to actual shares at a time of their choosing. To exercise the option the individual will need to pay the price of the options. If they are founding options issued at nominal value (usually £0.001 each) then the amount to be paid is also correspondingly small. If they were issued at a later date when the spin-out had gained in value then the amount the individual has to pay can be significant and most people in this situation usually wait until there is an event when the shares can be sold at the same time i.e. exit or IPO of the company.

A key advantage of options is that they incentivise the individual without immediately giving away equity. In other words, if the individual leaves before he or she is entitled to exercise the option, the option will lapse and they lose their right to earn further shares. Certain types of share option can be particularly tax efficient. Imperial Innovations can put you in touch with a panel of different tax advisers to give you advice on this (or you can select your own). Please note that if you elected for the Founder Driven/basic support option under Founders Choice™, you and your co-founders will receive a large majority of the equity in the company. As such it is expected that any share options you plan to issue will be created from the founders' equity pool. As the University Equity stake under such model is subject to a non-dilute protection mechanism, the issuance of new options will not affect the University Equity stake until the non-dilute expires.

The typical size of an option pool to cover everyone involved is between 10 and 15% of the total founding equity. The exact amount and the expected allocation of how much each eligible individual (or job function if a new team member has yet to be recruited) will need to be agreed by all the founding shareholders at the start.

As the spin-out raises investment and grows its team it is likely that the number of options will need to be increased to ensure there are sufficient options available to incentivise these new team members. The exact amount the option pool will be increased will be agreed between all existing shareholders and new incoming investors/shareholders.

You may also hear the terms 'reverse vesting' and 'claw back'. These terms refer to an alternative way of achieving the same objective as above. In this case rather than the 'grant, 'vest', 'exercise' flow of options, actual shares are issued at the start. Conditions are attached to these shares such that if the individual does not achieve the set targets or leaves the company then the company can take back those shares – claw them back. The conditions will be set out in a separate claw-back letter which will also give the company the power of attorney to carry out the legal actions needed to take back the shares. This alternative is usually only relevant for new incoming management and then only if it would benefit their personal tax situation. The principle difference to the two approaches is that the shares have voting and economic rights and options have no such rights until they are exercised and converted into shares. Obviously this could have an impact on the corporate governance of the company and should be considered carefully in this light.

Grant: to give an individual options to acquire a set number of shares at a date in the future or according to certain conditions being met.

Vest: a trigger event that converts options into the ownership of the individual. Before options are vested they do not have any rights over shares.

Exercise: after options are vested, the holder may exercise them - or use them to purchase shares. They must pay the value of the shares. If the company is at a mature stage, the option-holder may opt to wait until there is an event that allows them to purchase and sell the shares at the same time.

Get it in writing

The intensity of being in a spinout is such that some people have described it as a bit like being in a marriage. It is a long-term commitment and it will require a great deal of time and energy working closely together to build something great. To continue this analogy, some sort of "pre-nuptial agreement" makes sense when it comes to the division of equity and other matters – just to ensure that no-one forgets what was initially agreed!

At Imperial this is handled in two stages:

Stage one - Founders' Memorandum of Understanding
This non-binding document says that you (the founders) have all agreed to form a spin-out on the basis set out in the document. This document is not legally binding and doesn't commit you to anything, but it does flush out issues upfront and ensures everyone is not wasting their time. Its purpose is to make sure that the equity stakes have been agreed well in advance of formation, and that everyone understands and agrees to the journey you are about to embark on. Experience has shown that the Founders MoU is a helpful document that can help prevent misunderstandings later. Though it is non-binding, it is essential to the process that there is a common understanding before negotiations begin.

Stage two - Shareholders' Agreement
This is a binding legal document entered into by the shareholders of the company (Imperial Innovations and the founders) at formation. It governs their relationship (the rights and obligations of each party) and the operation of the company. It may also set out the terms on which each member may be applying (or subscribing) for shares in the company. These agreements may also be known as Investment Agreements or Subscription agreements or combinations of these terms. The investments in this context consist of the initial price (typically pennies) paid to purchase the founding shares by the founders.

Equity distribution: key points

Decide among the founders
Founders must, between themselves, decide how to allocate the founders' share of equity. Innovations and the College can provide guidelines and tools to help in this process but an agreement must be reached between all founders.

All founders
The College's policy is that all inventors should receive founding equity.

Equity for contributors
Founders may choose, if they wish, to allocate some of the founding equity in a spinout to non-inventive contributors to the development of the technology. This may include a lab technician or post-doc, for example, who may have done a substantial amount of the basic work that contributed towards the invention and eventual spinout.

Equity should reward essential people
The key message is to allocate the founding equity carefully and ensure that the people you need for the future success of the spinout are adequately rewarded. Imperial Innovations and the Research Office can provide you with advice on this.

Future incentives
Spinout equity will also need to be shared with people involved in the company in the future, such as management and future employees. This can be addressed in part through a share option scheme to reward input in future. Investors will be keen to see that the company's equity is divided in a way that will appropriately recognise and reward those people who are key to the strategic direction and growth of the company.

Decide early
Dividing equity must be addressed early in the process of forming a spinout. It is a complex multi-party negotiation and will never be easy, but it will get harder the later it is done..

Founders' equity is only the starting point
Following the division of founding equity, it will still be necessary for the founders and Imperial Innovations (acting together) to negotiate with investors what percentage of the new company will be sold in exchange for investment funding. In practice this will be an iterative, three-way negotiation. Imperial Innovations has assisted in hundreds of these negotiations and it is in our interests to conclude a deal as rapidly as possible in order that all parties receive a fair and reasonable share in the future success of the spinout.

Appendix one: additional factors to consider

The following factors provide additional 'modifiers' that you may wish to take into account when apportioning equity between academic founders. Note that as stated previously, you do not have to take any of these into account and many founder groups choose to rely solely on the first IP based 'inventive contribution' factor alone. You will need to decide if any of the other factors carry significant enough weight in your particular group of founders to modify the equity allocations to take them into account.

Who developed the founding Intellectual Property?

A strong intellectual property position creates a significant competitive advantage that can be essential for spinouts. Remember that IP is not the same as ideas. Ideas become IP through various legal processes (that you will likely have worked through with Imperial Innovations if you are at the stage of forming a spinout!) For a spinout, a strong IP and knowhow position can be very important for fundraising and to give credibility to the company. Due to the importance of IP we suggest the initial allocation of founding equity is based on inventive contribution to the company's IP. Other factors can be considered thereafter.

The drive for a spinout

Who came up with the idea for a spinout? Who looked into the markets, began to consider commercial applications for the research underway, and who first brought the idea to Imperial Innovations. Almost all of the work comes after the point of the idea, but without the idea there would be no spinout. It is also important to consider who provided leadership in these very early stages? Which founder brought others in to work on IP and set the early direction? We've found at Imperial that seniority doesn't always equate to leadership – often an early-career researcher or student may be the primary driving force behind the spinout. Also pay attention to early work put into developing and testing a business plan: this is a substantial task and key to the future of the company in many ways.

Academic reputation or publicity

Reputation is important when fundraising (and it's almost certain that fundraising will be important to your spinout). If you're an early-career researcher, it might be much easier to have a well-known and widely-recognised academic co-founder on the team. If this is your first time around, you may benefit from working with another co-founder who has raised investment in the past (especially if they've built a successful exit, too).

Experience and expertise within the industry

To build a business, you will need to get time with customers, mentors and advisers who know the industry you want to work in. If one of your co-founders has this, either through time spent working in industry or through industrial research collaborations, say, then it can make things substantially easier.

Sacrifice, commitment and risk

Those academic founders who commit most and start on the path of academic entrepreneurship are a highly valuable asset for spinout companies. Their commitment to the success of the company can be a strong contributing factor to its development and growth. They may also take a significant risk if, for example, they choose to leave an academic post and take an integral position in the company. They should be rewarded for this through share option schemes, though taking into account the fact they may draw a salary.

Salary & contribution

It's quite normal for founders to work for low or no salary in the early days of a spinout, but you should remember that this should not be made up with additional equity – the initial share of equity already accounts for this. It's also very difficult to determine how much additional equity should be supplied to make up for lost salary, and it can raise difficult taxation and accounting issues. It is best practice to be explicitly clear about remuneration packages and manage expectations

Key tests to help determine how vital an individual is to the spinout

- Keyman: If this founder left, would it severely impact your chances of pulling the spin-out and founders together and attracting investors?
- Wiseman: If this founder left, would the loss of their deep knowledge/expertise mean that your development schedule would be severely impacted?
- Salesman: Is this founder vital to being present for the pitches to investors?
- Talisman: If this founder left would other valuable employees likely leave too?

Appendix two: share capitalisation table - an example

Here is an illustrative example of a Cap table. Every spin-out's situation will be unique. This example illustrates a situation where there are inventors from an external institution and at least part of the research funding has come from Charities and there is a College level agreement whereby the Charity receives a portion of all the revenue Imperial College London receives from commercialisation of the arising IP.

The starting assumption is that the external contribution to the IP is the same as Imperial's.

Step 1: Imperial academics agree the founding split between them and under the Jointly Driven option the Imperial Institution split is 50:50.

Step 2a: Inventor B steps up as the Academic Entrepreneur who will set aside time to drive the company forward. To incentivise B everyone agrees to grant B options.

Step 2b: At the same time the appropriate share of shares due to the Charitable funders is calculated and taken out the Imperial institution share.

Step 3: Investment. Assuming a middle of the road company valuation and seed investment to illustrate how the dilution of taking investment in exchange for equity will impact the founding shareholdings.

	July 2018 Founding equity					
	Shares issued	*Options issued*	*Total shares after new money*	*% holding*	*Total options after new money*	*Diluted holding*
Price per share	£0.001					
Imperial inventor A	1,250		1,250	10.42%	0	8.85%
Imperial Inventor B	750		750	6.25%	0	5.31%
Imperial Inventor C	1,000		1,000	8.33%	0	7.08%
Imperial/ Innovations stake	3,000		3,000	25%	0	21.25%
Charitable funders			0	0.00%	0	0.00%
All external inventors	3,000		3,000	25.00%	0	21.25%
External institution	3,000		3,000	25.00%	0	21.25%
Investors						
Unallocated options for future employees/ management		2,120	0	0.00%	2,120	15.01%
Total	12,000	2,120	12,000	100.0%	2,120	100.0%

	October 2018 Option grants and charity revenue shares						*October 2018 Illustration of £250,000 investment*					
	Shares issued	*Options issued*	*Total shares after new money*	*% holding*	*Total options after new money*	*Diluted holding*	*Shares issued*	*Options issued*	*Total shares after new money*	*% holding*	*Total options after new money*	*Diluted holding*
Price per share	£0.001						£35.41					
Imperial inventor A			1,250	10.42%	0	8.85%	1,250		1,250	6.56%	0	5.90%
Imperial Inventor B		800	750	6.25%	800	10.98%	750		750	3.93%	0	7.32%
Imperial Inventor C			1,000	8.33%	0	7.08%	1,000		1,000	5.25%	0	4.72%
Imperial/ Innovations stake	-1,000		2,000	16.67%	0	14.16%	3,000		3,000	10.49%	0	9.44%
Charitable funders	1,000		1,000	8.33%	0	7.08%			0	5.25%	0	4.72%
All external inventors			3,000	25.00%	0	21.25%	3,000		3,000	15.74%	0	14.16%
External institution			3,000	25.00%	0	21.25%	3,000		3,000	15.74%	0	14.16%
Investors			0	0.00%	0	0.00%	7,060		7,060	37.04%	0	33.33%
Unallocated options for future employees/ management		-800	0	0.00%	2,120	9.35%		0	0	0.00%	1,320	6.23%
Total	0	0	12,000	100.0%	2,120	100.0%	7,060	0	19,060	100.0%	2,120	100.0%
fully diluted pre-money valuation			£500,000									
new investors			£250,000									
post-money valuation			£750,000									

Appendix three: references and acknowledgements

Authors and contributors

This guide to allocating founding equity in university spinout companies was developed by Imperial Innovations with major contributions from:

- Tony Hickson, Managing Director
- Govind Pindoria, Director, Venture Support Unit
- Gavin Reed, Marketing Manager

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As with all specialist documents, best practice is in a state of change, and we welcome the feedback of readers. If you would like to comment on the document or ask further questions please contact: info@imperialinnovations.co.uk

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Imperial Innovations Venture Support Unit

The Venture Support Unit (VSU) is Imperial Innovations' dedicated company formation and support team. Working exclusively with Imperial staff, VSU can accompany you on your journey to becoming an entrepreneur.

We ascribe particular importance to the steps that founders take before they form a company. This planning and research stage is integral to the success of high-technology spinouts. Our expert team will support Imperial entrepreneurs to conduct market research, identify and interview customers, and establish the company value proposition.

Our team can inform and advise you and your business throughout its growth, from pre-formation to growth and fundraising.

The VSU is at the centre of a wide network connecting entrepreneurs, talent, established business, mentors, and business angels.

The Venture Support Unit website contains further information on the Imperial spinout process, services offered, spinouts, resources, and information on training as well as a guide on what to expect throughout the entrepreneurial journey.

www.imperialinnovations.co.uk/venture-support/

Advice for company founders

Imperial Innovations is happy to provide a range of advice to Imperial-based company founders. This guide focuses on how to distribute equity in a new business, but if you have other questions you can use the resources available on our website, or contact a member of our team.

www.imperialinnovations.co.uk

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