broadest protection. You should consider the full range of protection tools, not just patents, and use them in combination where appropriate. Consider in which countries you need protection. If you have a top-level strategy governing the countries where you file patents and trade marks, is it appropriate for this development? Often the choice of countries is delayed as long as possible when filing patents, for example using a filing sequence as shown in Figure 29.1. This allows more time for the business opportunities of the invention to be assessed. However, it may be important to obtain rights quickly in some countries, for example to take action against competitors who are likely to launch infringing products (see Section 29.10). You should discuss the most appropriate way of achieving this with your IP attorney.

As a fictitious example of the points to consider, imagine you have invented an ingredient combination "Floatium" that when added to chocolate makes the chocolate lighter than air so that it floats like a helium balloon. You would review the protection tools available and decide that keeping this invention secret is not an option, as once the product is on the market the key ingredients will need to be declared on the ingredient list. So patenting seems to offer the best protection.

Your first thought might be to quickly patent a chocolate with just that particular ingredient combination. However, on reflection you realise that there are other useful things you could protect. You talk to your colleagues in the laboratory (they are bound by their employment contract to secrecy) and they point out that other similar ingredients might have the same effect. So, in parallel with the development of the main Floatium ingredients, the lab team dedicate a small amount of time to testing their ideas and establish a family of Floatium ingredients. These ingredients work in the same way, although they are not as effective as the original combination. You therefore file a patent for a lighter than air chocolate comprising the Floatium family of ingredients. To support the product claims, you add examples showing how to manufacture the lighter than air chocolate with a representative selection of the ingredient combinations. You add claims for the manufacturing process. By taking some time to check what else might work you have been able to broaden the claims and avoid a competitor readily being able to modify your ingredient combinations and so launch a product with the same benefit to consumers. Competitors may work around your patent eventually, but it will take time, during which period your product can become established on the market.

The Floatium ingredient combinations might have many other applications, not just in different foods, but in areas such as transport. Currently you do not have the resources or expertise to explore this. In the patent you also include claims for the Floatium ingredient combinations themselves and their use to make objects float in the air. By being first into a new technology area you have the best opportunity to obtain broad protection. Other people may subsequently solve the problems associated with further uses of Floatium and then patent

their new products and processes. However, they will not be able to manufacture or sell products containing Floatium without your permission, as long as your patent for the Floatium ingredient combinations is in force. Patents are a right to exclude others, they do not necessarily allow you to use your invention. A patent which prevents the use of later patents is sometimes called an "umbrella patent". You may be able to make money from the "umbrella patent" through licensing it to the owners of the later patents, or agree a cross-license if you want to use their later patents.

You decide to file your patents in all the countries where you currently have sales and manufacturing. You also choose to file in China as you see a great potential for the product there. The new product does not fit with any of your existing brands so you decide to trade mark the name FLOAT-O-CHOC as well as a distinctive logo ready to use in a major advertising campaign. The product requires special packaging to stop the chocolates floating away when the pack is open. A packaging tray with attractive tabs each in the shape of the brand logo is developed to hold the sweets in place, so you file a design registration to protect the appearance of the pack. You register the designs and trade marks in the same countries as the patents, with appropriate modifications of the trade marks to suit the different languages. You enter into a partnership with an ingredient manufacturer to produce "Floatium" on your behalf, using a non-disclosure agreement for initial discussions and then agreeing a contract setting out the terms of your business partnership and protecting any confidential information exchanged. You realise that you will not be able to supply and distribute the product in China, so you licence the relevant IP to a local manufacturer who will produce the product and pay you a royalty. In this way you have combined available protection tools to prevent others from freely copying the advantages your idea brings.

Development work continues on FLOAT-O-CHOC, with particular emphasis on optimising production efficiency and reducing cost. A new class of cheaper ingredient is identified that can be made to have the same desirable properties as "Floatium" by ingenious processing of the chocolate. This new processing method and ingredient are then patented, six years after the original patents were filed. When the original patents expire, competitors will be free to produce their own versions of the float-in-the-air product using Floatium. However, the later patents still protect the new cheaper ingredient for another six years, maintaining some competitive advantage. As the development continues, a number of machine modifications are found to improve the manufacturing efficiency, but it is decided to keep these as trade secrets.

Given the high cost of developing new products and processes and bringing them to market, it is important that you can sustain your competitive advantage for as long as possible. For those interested in exploring IP strategy in more detail, many books have been written on the topic such as Barrett *et al.* (2008), Blaxill (2009), Harrison and Sullivan (2011) and Knight (2013).