**CASE STUDY 7**

**Pre-Launch Decisions which Influence Innovation Success**

It has been extensively documented in management literature that an incredibly large share of firms’ investments in technological innovation do not generate substantial financial returns. Three main reasons underlying this phenomenon can be identified. First, technological innovation creates knowledge and technological assets that often remain largely unexploited. Various studies show that between 70 and 90% of corporate technology assets often never get used in core products or lines of business. Second, the likelihood that an innovation project reaches completion and that the new product is introduced into the market is strikingly low. It has been estimated that the probability of new product commercialisation is about 40% in many industries, with some cases (e.g., pharmaceutics) where the mortality of innovation projects is much higher. Finally, a large share of the innovations that ultimately reach the market do not experience a satisfactory diffusion and their sales are discontinued. Empirical studies have shown indeed that on average 40–50% of fully commercialised new products turn out to be commercial failures.

An important managerial question is however left unanswered: which are the levers a manager can act upon to achieve adoption network acceptance and early adopters’ acceptance for a high-tech innovation, having a given functional content and a set of technical specifications, which is introduced within the scope of a given competitive and product strategy ([Table 7.5](http://devry.vitalsource.com/books/9781119961987/content/id/ch07tab5))?

**TABLE 7.5 Commercialisation factors influencing the adoption of innovations**

| **Variable**  | **Description**  |
| --- | --- |
| Timing | * – When will the innovation first be launched into the market?
* – Will the firm announce the innovation to the press long before its market launch?
* – Will the firm partner with external organisations long before the official market launch?
 |
| Targeting and positioning | * – Which market segments will the innovation will be addressed to?
* – Which will be the position of the innovation in the eyes of potential adopters in each of the targeted market segments?
* – Will the firm target different segments as long as the commercialisation process progresses?
 |
| Inter-firm relationships | * – Which external organisations will the firm partner with during the commercialisation of the innovation?
* – Which forms of relationships will be most appropriate (e.g., licensing agreements, strategic, long-term partnerships) to organise such relationships?
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Pricing

 – Which pricing strategy (e.g., skimming or penetration) will be used for the market introduction of the new product?

 – Which pricing strategy will be adopted for complementary goods and additional services?

The commercialisation processes of 11 technological innovations, launched in high-technology markets in the past 30 years, were investigated using this approach ([Table 7.6](http://devry.vitalsource.com/books/9781119961987/content/id/ch07tab6)).

**TABLE 7.6 Successful and unsuccessful innovation examined**

|   | **Radical innovations**  | **Systemic innovations**  |
| --- | --- | --- |
| **Unsuccessful innovations**  | Apple NewtonIBM PC-JuniorSony Betamax | 3DO Interactive MultiplayerSony MiniDiscApple NewtonSony Betamax |
| **Successful innovations**  | Tom Tom GOSony WalkmanRIM BlackBerry | Palm PilotNintendo NESApple iPod |

Comparing the commercialisation of the successful and unsuccessful systemic innovations in the sample, a number of decisions were taken along the dimensions.

**Inter-Firm Relationships**

Our analysis indicates that obtaining the support from the critical members of innovation’s adoption network requires chiefly a careful administration of the inter-firm relationships that are established before and along the commercialisation process.

The decision to prevent other companies (e.g., competitors and suppliers of complementary hardware and software) from manufacturing products based on the innovation’s underlying technology is likely to be a first detrimental decision for the large-scale adoption of a high-technology innovation. This is due to the strong network externalities that high-tech markets, because of their tight interconnectedness, are currently experiencing. Accordingly, letting the actors of the adoption network manufacture products based on the innovation’s technology (e.g., through advantageous out-licensing agreements) increases the availability of complementary products and the chances that a potential adopter chooses to purchase the innovation. This in turn exponentially enhances the value of the innovation in the eyes of both subsequent adopters and the other members of the adoption network, in a self-reinforcing double-loop cycle. The effects of this commercialisation decision are very clear when comparing the cases of the Palm Pilot (whose OS operating system was released for free to all manufacturers of adds-on and software applications) with that of Sony Betamax (with the Japanese firm that accepted to licence the underlying technology to Zenith only more than one year after launch, when the incoming success of the VHS by JVC was already undisputable).

It also emerges as a critical approach to win the support of the critical members of the adoption network to enter into long-term, strategic partnerships with them. This allows firms to share the risks and the costs they incur when supporting a systemic innovation (e.g., developing and manufacturing ad hoc, specialised, complementary devices or pieces of software). This is what Palm did, in 1996, when commercialising its Pilot: it decided to sign a 20 million agreement with Circuit City to ensure adequate shelf space and customer education services for its new product. Similarly Apple, to streamline the acceptance of the iPod and the associated iTunes Music Store service, was able to convince a number of record labels (e.g., Sony Music Entertainment, BMG, EMI, Universal and Warner) to endorse the new service provision model ensuring a 65% compensation for each song sold through iTunes. In a similar vein, Nintendo invested heavily in order to obtain the full support for its NES from the most important game developers (e.g., Taito, Bandai, Capcom). This required the Japanese firm to grant above the average money compensation for each game sold. Sometimes the innovating firm instead refuses to establish any partnerships with the members of the adoption network, or simply sets up arm’s-length, commercial relationships with them, with the aim of maximising its potential profits from the innovation. This is evident in the case of 3DO, which failed to establish any forms of relationship with the developers of software titles and the manufacturers of consoles for its new Interactive Multiplayer. A similar phenomenon is clear in the commercialisation of the Betamax, where Sony refused to partner with video rental channels and film producers (with the exception of Paramount Home Video, with which a Joint Venture was established).

A critical member of the adoption network for content-based innovations is the community of small and highly creative software and application developers. In order to secure their support, it is especially critical to develop an easy to use software authoring kit that is made available for free or at a very low price. This is what Palm did when it released for free the application development kit for its Pilot. 3DO, on the other hand, decided to sell the authoring system for the Interactive Multiplayer for several thousand dollars.

**Timing**

Besides the form of the inter-firms relationships with the critical members of the adoption network, it seems that the timing with which they are established is important in determining the degree of support they ensure to the innovation. The analysis indicates that sometimes firms deliberately postpone the establishment of strategic partnerships with the adoption network on the assumption that, once the innovation has taken off in the market, its critical players will support it of their own accord. However, it often happens that, after an initial, unexpected growth of the new product’s sales, the innovation never diffuses in the largest part of the target market. This is what happened in the commercialisation of the MiniDisc: Sony refused to partner with consumer electronics outlets (which played a critical role in ensuring a wide availability of recorded music albums) in the belief that the new format would diffuse into the mass market and, as a result, force outlets to provide the required shelf space. This phenomenon is due to the fact that the bulk of a high-tech consumer innovation’s target market is made of people who resist new products and experience a high level of uncertainty when evaluating the opportunity to buy them. Although early adopters might be willing to purchase the new product whilst it is not backed up by the critical members of the adoption network (because they are mainly attracted by the technical content and degree of sophistication of the innovation and are able to more objectively assess its advantages), this represents an important signal to later adopters of the value of the innovation, which helps reduce their resistance and customer uncertainty.

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Therefore, although a high-tech innovation may experience an unexpected sales growth immediately after launch without support from the critical players of the adoption network, it is of paramount importance to rapidly secure this support, through the establishment of long-term, strategic partnership, if large-scale adoption is to be achieved. All firms whose innovations had experienced a relevant and rapid diffusion in the bulk of their target market started very early indeed to work with the adoption network’s critical players. This is clear in the cases of the Pilot by Palm, the NES by Nintendo and the iPod by Apple.

It often happens that firms rush to market their high-tech innovations in an attempt to establish them as technological standards and to quickly recover their R&D investments. This sometimes leads to the launch of an incomplete product, with some functionalities not working perfectly, as a result of the acceleration of development and testing activities. This seems to have a very negative effect on the attitude developed by early adopters. Companies sometimes prefer shortening time to market at the expense of product completeness on the assumption that the potential technical problems will not affect the purchasing decision and the satisfaction of the average member of the target market. In doing so they overlook that the innovation is adopted immediately after launch by those customer segments that are most sensitive to the new product’s technical content and sophistication, and whose opinion about the new product is key in affecting subsequent purchases. This erroneous conduct is clear in the commercialisation of the IBM PC-Junior and the Apple Newton, while there is no sign of new product acceleration for the successful radical innovations in the sample (e.g., Tom Tom GO, Sony Walkman and RIM BlackBerry).

It should be noted that the negative impact of the launch of an incomplete product is exacerbated by an overblown pre-announcement campaign, which raises the expectations of early adopters and leaves them disappointed when a deficient version reaches the market: their attitudes to the innovation as a whole are thereby negatively affected. This happened with the Apple’s Newton, which was announced 18 months before the actual launch and was known as one of the most-hyped and postponed products for years. Similarly, the PC-Junior was pre-announced about 12 months before the launch, which fuelled the curiosity, rumours and enthusiasm that accompanied the new product. Analysts started referring to the PC-Junior by the nickname ‘Peanut’. Interestingly, IBM itself contributed to nurturing these expectations by drawing a thick curtain of secrecy over the new product after having pre-announced it.

**Targeting and Positioning**

Especially for content-based innovations, it seems that a firm more easily succeeds in orchestrating the behaviour of the adoption network’s players and in securing their support if the positioning of the new product is unambiguous. The experience of 3DO in the commercialisation of the Interactive Multiplayer is paradigmatic in this respect. The new, revolutionary console always lacked a library of software titles that were able to fully exploit its graphic capabilities. This was partly due to its unclear positioning: the Multiplayer was sold as a gaming platform with advanced interactive, learning and educational capabilities, enabled by its CD-Rom support, that caused confusion in the developers community about the exact applications that were required for its commercial success. On the other hand, the NES by Nintendo was unambiguously positioned as a gaming system, and the Palm Pilot as a substitute for personal paper-based organisers.

The incapability to understand that an incomplete new product is likely to elicit a very negative reaction in the first market segments that adopt it is also due to a lack of pro-active targeting of these early adopters. The firms in the sample that failed to raise a positive post-purchase attitude of early adopters had not targeted the innovation at any specific market segments after launch. This is clear in the cases of Apple’s Newton and IBM’s PC-Junior that were aimed at a broadly defined market made of mass consumers and families with children. It was only after the first months of sales that managers realised the new products were being purchased by people with a very different profile than the average target customer (namely, executives and companies looking for sales force automation applications, and managers used to working with a traditional PC at the office who wanted to bring some work at home). On the other hand, when commercialising the Walkman, Sony realized that it was going to be initially purchased by young men fond of sport and outdoor living, and that the ‘near CD quality’ of sound reproduction associated with advanced portability of the device was key in affecting their post-purchase attitude. Similarly, RIM targeted its BlackBerry immediately after launch to top executives (e.g., Chief Information Officers, Chief Financial Officers) or sales agents who had a compelling reason to receive e-mail messages in real time while travelling for work, and ensured that this functionality was working perfectly from a technical point of view.

**Product**

The aforementioned lack of targeting of the innovation’s early adopters is detrimental also because it often prevents firms from devising a configuration of the whole product at launch that meets early adopters’ expectations, which are usually very different from the intended average target customer’s. For instance, the IBM PC-Junior was not compatible with many of the applications available for the traditional PC, and the Apple Newton lacked connectivity with PC and Macintosh at launch. It is noteworthy and seemingly nonsensical that both IBM and Apple had sponsored these capabilities of the new products during the pre-announcement campaign, which exacerbates the negative effect of an inappropriate product configuration at launch over early adopters’ satisfaction. This might be the result of the attempt to anticipate the launch of the innovation without a clear targeting of the early customers.

On the other hand, the successful innovations in the sample do not seem to have missed any critical functionalities to satisfy early adopters’ expectations. How could this be achieved? The analysis suggests that an effective commercialisation strategy could need to include a limited number of simple functionalities in the configuration of the new product at launch, designed to satisfy the compelling reason to purchase of early adopters. The product configuration is enriched with additional functionalities as long as the innovation diffuses in the less innovative segments of the target market. An essential prerequisite for successfully adopting this approach, which increases the likelihood that the new product is complete at launch despite a firm’s attempt to rush it to market, is a careful targeting of the innovation’s early customers. This approach was for instance adopted by RIM in the commercialisation of the BlackBerry. In order to improve the chances of satisfying the new product’s early customers, RIM decided to design and launch a simplified version of the BlackBerry, called Desktop Redirector, that could work using as a mail server any PCs or laptops and only featured the revolutionary ‘push’ approach to mail delivery. Agenda, address book, and synchronisation with PC were added as long as the BlackBerry diffused in the market. On the other hand, Apple tried to include as many complex functionalities as possible in the first version of the Newton (e.g., infrared communication, advanced handwriting recognition, contact manager, organiser, synchronisation with both PC and Macintosh, traditional and wireless phone connectivity), some of which were absent or did not function perfectly at launch, resulting in a very negative attitude from early adopters.

**Advertising and Promotion**

The role of the pre-announcement campaign in influencing the post-purchase attitude of early adopters has already been discussed in this section of the chapter. In particular, it has emerged that an early pre-announcement of the new product generates great expectations in the innovation’s early adopters. If the new product at launch fails to fulfil these expectations, because it is incomplete as a result of a rush to market, or because it lacks some functionalities that are critical for early adopters, the latter turn out to be highly dissatisfied with the innovation, and their opinion about it freezes any further diffusion of the new product. Therefore, if a firm chooses to pre-announce early a high-tech innovation, it must be sure to arrive on the market with a complete product having the few, critical functionalities that are necessary to satisfy the compelling reason to buy of early adopters. This is consistent with literature on New Product Pre-announcements (NPPAs), which indicates that pre-announcing and then missing introduction dates for new products is not detrimental per se in terms of customer acceptance. It becomes problematic only in the case when the new product, once it reaches the market, fails to fulfil the expectations of early adopters nurtured by the pre-announcement campaign. This is exactly what happened with the commercialisation of the Apple Newton and the IBM PC-Junior.

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 2. What are the critical differences in the timing and positioning of successful versus unsuccessful innovations?