



Doing R&D in China

One has probably read enough on China being a leading manufacturing base and a large market for everything. However what is unknown to many people is that China is also now an emerging strong science and technology (S&T) base. Every year about 250 000 engineering students are currently enrolled in education; 61% of undergraduates in the education system take up courses in science and engineering and graduate enrolments increase: science and engineering accounts for 70% of masters and 80% of PhD students.

China becomes increasingly competitive in advanced technologies, with new technology standards being created by Chinese for China. The most well-known is the TD-SCDMA for the 3G standard, which will be adopted by the Chinese government in its license for 3G later this year among other main stream European and US originated standards. Sophisticated local taste and preference are strong drivers for a Chinese way of technology approach and development. The Government is keen to encourage S&T as a driver of the new economy and the Chinese Ministry of S&T has launched various S&T funding programmes worth billions of dollars. Domestic companies are encouraged to invest in R&D.

In spite of some apparent difficulties such as language barrier and IPR problems, China has become a magnet for R&D operations for foreign companies. Globalisation leads to more offshoring of R&D and China has thus become the third largest R&D performer behind the US and Japan. It is emerging as an R&D force in sectors such as telecom, software, nanotechnology, biotech and genetically modified crops. The number of R&D investors has tripled since 2002 to about 750 in 2006.

So, what are the advantages of doing R&D in China? Costs of hiring engineers and researchers are still low in relative terms, but increasing. Overall operational costs are also low, although the cost saving can be less when extra overhead costs are included. The talent pool is huge, albeit getting more conscious of its value. Doing R&D in China has the advantage of being closer to your market and consumers in China. You can develop products that meet Chinese technology standards more easily. Your R&D operations are also highly encouraged by the Chinese government as it is the national goal to move the country into more advanced niches of the economy. Furthermore, there are investment incentives such as tax rebates, favourable land use, and faster approval – and you are seen as a more committed, trustworthy and long-term partner by the Chinese government, the public, and stakeholders.

However, you need a clear strategy with respect to product localisation and local support, in favour of developing products for global markets, and towards high-tech and core R&D. You need a creative and efficient local work force, which you should nurture and empower and treat as equals. You should look for the right local partners, thus facilitating the access to government funding, faster commercialisation for the Chinese market and good PR leverage. While Shanghai and Beijing are well-known R&D locations, Hebei and Chengdu have become high quality alternative locations. Last but not least, you need effective IP protection in the context of a weak IPR regime.



A good advice: when thinking about R&D in China, do not panic, do not ignore it, but pick the right partner. You must determine your strategy, seek advice, do your homework, and get there before the competitors do. However, not only find the right partner but know him well, do not be naïve about your comparative advantage, and develop an effective IP strategy.

Such a strategy should focus on prevention. Choose the technologies for the Chinese market carefully and cultivate relationships with local authorities. Publicising abuse by competitors, former employees, etc. can be to your advantage as it generates respect. You should involve staff, partners, suppliers, agents and other firms in your IP undertakings. It is good practice to design-in measures that inhibit abuse, such as keeping key innovation at home and spreading your manufacturing (manufacture and assemble in different locations). A recommended structure for R&D centres in China in terms of better protection of IP are hierarchical modular structures, ie, China centre carries out the peripheral R&D at initial stage and move on to more core R&D activities.

It is only common sense for choosing your partners and working together that you should not go right away for early choices, that you do due diligence, that you do not sign exclusivity until results are proven and that you have commitment from the top. At the same time, there should be ongoing two-way communication with your partner and performance should be reviewed regularly. However, you should be sympathetic and flexible when problems occur. You need to ensure business goals and interests are aligned between yourself and the Chinese partners.

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