Wang Laboratories...

One hell of a ride!

Steve Green - 17 February 2017

A stroll down memory lane.....

Introduction

A couple of emails arrive from Dave Naber and all of a sudden you cannot stop thinking about a business that brought us all together perhaps over 30 years ago.

Naturally none of us works for Wang any longer, with many of us left Wang decades ago to progress our careers in a vast range of roles and organisations, and indeed many of the "class of 79" that I joined have now retired.

However despite how many businesses we worked for both before joining Wang and since leaving the company, Wang frequently represents the best business that we ever worked for!

So reading articles about the demise of Wang Laboratories, and hearing all those "what went wrong" stories fails to obscure the simple fact that for Wang staff it was one hell of a ride!

Its pissing down outside, so from my humble abode in Mangawhai New Zealand, allow me to suggest ten most significant aspects assocociated with the rise and fall of the Wang dynasty!

1. Dr Wang

This wonderful gentleman was first and foremost an engineer at heart. That's why despite the logo changing a number of times, the company was always viewed by the doctor as being a laboratory. The day the company was listed marked the end of the laboratory culture and the start of being a corporation. Yes, this resulted in access to funding to grow what became a multi-billion dollar global corporation. However meeting Wall Street's agressive quarterly revenue and profit expecations was totally incompatible with running an R&D centric business.

Scientists and engineers who start businesses seldom continue to lead them! Looking to other successful corporations that prospered around that time e.g. IBM and Xerox also have a profound focus on R&D, but employed professional business management to deliver their products to the marketplace and gain market share.

Sadly this remarkable and gentle man was both the main driver of Wang's success and ultimately their decline.

2. Fred vs John

Much had been written about who should have become CEO and able to take the company to new heights. Certainly the departure of John Cunningham was a tragedy and felt massively by Wall Street, the shareholders, and indeed by most of the management throughout the company.

But Wang's culture was as a family business, and Fred and Courteney were the next cabs on the rank! Was Fred suited to the role? Probably yes. He had a decent education, understood the culture and logistics of the business and industry, and had the drive and personality to succeed.

However the company was already beyond its zenith and moving towards its nadir and demise. This made his job almost impossible. Up to his appointment the major challenge was managing growth. Fred and the management team were poorly equipt to manage decline!

The subsequent appointment and departure of John Chambers, who then led Cisco to global stardom, suggests that in hindsight Fred's challenge was beyond anyone's capabilites.

3. Three businesses in one!

Certainly history states that it was the 2200 series of computers that was responsible for Wang becoming a successful business, establishing an international presence, and building a valuable army of software houses capable of building market share in a wide range of vertical marketplaces. However the Wang brand was not well known in the IT departments of the Fortune 1000 nor in the typing pools... essentially a fringe vendor working the small business marketplace with vertical industry software packages.

So whereas the 2200 systems enabled Wang to establish an international business, it was not a natural path for future development and success.

Wang almost overnight became a business with three product and business lines. The traditional 2200 systems, the word processors (WPS and OIS series), and the VS range of general purpose minicomputers.

Naturally there was internal competition not just for R&D funding but also for talent!

Whereas the word processors could certainly do some computing, using a very limited Basic language, the word processors were targeted at the typing pools and senior secretary marketplace. Indeed it revolutionised this market sector resulting in a vast

increase in productivity and accuracy combined with major redundancies in the typing pools.

Even though Wang became synonymous with word processing, seldom were the IT managers of major businesses concerned with the potential penetration of their traditional computing and their established vendors relationships. The corporate computer rooms were still dominated by the traditional mainframe vendors (ICL, Honeywell, Burroughs, Sperry, NCR, Xerox, and a neat crowd called IBM!).

Of these mainframe vendors only IBM had a creditable minicomputer product line, be they somewhat incompatible with their all-conquering mainframes.

Suffice to say that Wang in the late 70's was effectively three businesses, quite often working in different offices in the same city!

The Wang VS was targeted at medium sized businesses, especially those with old IBM gear. As such the VS was to be the businesses central computer. Seldom was the VS targeted to replace mainframes or to be considered the technology of choice within the Fortune 1000.

Looking back on those days, even Wang's most successful "national accounts" had but a very minor percentage of their overall IT spend.

4. The competition

As Wang quietly mothballed the 2200 in the early 80's so that they could focus on word processing and general minicomputing, the competition were invariably single market companies.

The typing pools were targeted by businesses such as CPT and Wordplex, distant names long since liquidated. Wang won!

The marketplace for minicomputers was however different. Not only were there many IT vendors who solely marketed minicomputers, but also the giant Big Blue with their vast range of technology and globally loyal customer base. Vendors such as Digital, Prime, Data General, Altos, and Hewlett Packard all had decent gear and enjoyed getting their slice of the minicomputer marketplace. IBM and DEC were the big winners between 1975 and 1985... the minicomputer's golden era. However the VS was a huge success, with staff and customers knowing how exceptional the range was.

Regrettably IBM and DEC had an unbeatable advantage.... they both had a massive customer base for their new products. In the case of IBM their Systems 34, 38 and AS400 were natural upgrades for their aging Systems 3's whereas DEC was able to leverage their

PDP installed base when they launched their VAX minicomputers. Why was this crucial? Simply that every VS sale was by nature competitive, frequently having to compete with IBM which remains considered one of the best marketing companies the planet has ever known. Whereas the VS was sold on a deal-by-deal basis into businesses that had older IBM minicomputers in need of replacement, minimal success was achieved in truly major corporations who relied upon mainframe capabilities.

It is to be noted that whereas Wang did not survive beyond the VS neither did all the other minicomputer businesses! The likes of Prime and Data General went belly-up; whereas the other vendors invariably executed an exit strategy of being bought by a general purpose technology vendor e.g. HP acquiring DEC (and subsequently Compaq!).

5. The exit strategy

I do not think that Wang ever contemplated an exit strategy!

There are normally two strategies on offer. Firstly "TTMAR" and secondly be taken over by a larger business that needs your intellectual proporty, products, distribution network, and customer base.

But as essentially still a family business TTMAR was never going to happen. During this period the traditional mainframe vendors naturally sought to have a creditable minicomputer offering, not only to generate new business but to protect their customer bases. Many smaller minicomputer companies went this way e.g. Convergent and Microdata, but in Wang's case no mainframe vendor looked fondly to Wang as they did not want to purchase a business that had three divisions with only the VS line being of appeal. By this time the 2200 was trailing edge and the word processing marketplace fully exploited... and with the introduction of PC's the word processing market was transforming into being an application and not a dedicated hardware system.

Therefore whereas the VS range represented an attractive offering for mainframe vendors, they would not pay a premium for two additional divisions that offered them minimal prospects.

TTMAR by the way is the normal New Zealand exit strategy.... take the money and run!

6. Office automation

With its product range expanding e.g. Wangwriter and Wangnet, Wang redefined its vision into being THE leader in "Office Automation". The potential rewards associated with vendors able to define and service a brand new marketplace can be enormous... just ask Google and Facebook! However the funding and time needed to educate the market

as to the benefits of office automation were significant as was the investment needed in staff able to market, sell and support this concept.

In short Wang bet the bank on succeeding in a new marketplace with minimal customer acceptance and unknown potential.

Their "flagship" technology in support of office automation was Alliance. Naturally the decision needed to be made as to what platform to support it. The choices were the VS, OIS or a brand new platform. The choice of the OIS was a strategic mistake!

Whereas the OIS may well have been the quickest route to market, having Alliance on the VS would have made this range truly pivotable to the future of the business and indeed a far more attractive proposition for potential purchasers of the company.

A multi-functional and expandable system able to handle a corporate's IT, word processing, communications and office automation requirements would have been a world class offering. It never happened!

I do accept however that those associated with the OIS range of word processors were perhaps more aligned to marketing the office automation concept, however this was at a time when few corporates had a fix on what office automation really meant for their business and therefore there was seldom a budget nor accountable managment to sell to!

7. The 6 key technologies

Wang was well ahead of the pack in defining the science behind office automation.... the 6 key technologies. This concept had great validity and to one degree of other was the basis of product development during the final years of the company.

The proposition that modern systems had to be able to seamlessly process data, text, voice, image, communications and human factors had great merit and was quite revolutionary at the time. Wang never made it, but it was a great story to pitch to prospects!

The 6 key technologies has proven valid.... just a bit sad that we had to wait a further 30 years for it to materialise in the iPad! and for $450.

8. PC revolution

Much has been written on the PC revolution, not just in business but in our private lives. However in Wang's case it was profoundly damaging despite the fact that Wang was an

early entrant to the marketplace with its DOS compatible systems in the early 80's. The damage was caused by word processing ceasing to be an industry and becoming simply an application. With the emergence of PC based alternatives e.g. Word, Wordperfect, AmiPro etc, the advantages of having numerous applications on one general purpose system rapidly outweighed having either stand alone or multi-user dedicated word processing systems. In a matter of a dozen years word processing as an indutry came and went!

Naturally the likes of IBM and DEC embrassed the personal computer as not only they could sell these devices to their customer base but also protect their major customers against advances by the traditional minicomputer vendors.

Furthermore the vast army of application software houses raidly moved from producing applications that ran on one proprietary platform to the emegring Microsoft based industry standard. This made it harder to gain access to innovative VS based applications. Independent software houses, many aligned to Wang since the early days of the 2200 in the 70's were now leaving Wang in droves.

Finally margins on desktop technologies were minimal whereas they were substantial on the VS and OIS ranges. Businesses such as Wang therefore needed to look elsewhere for profitable revenue with software and services the natural solution, but Wang was late to move into this direction, and almost without saying was not in the DNA of a laboratory that specialised in "finding a need and filling it".

9.   The database

The competition were not asleep in devising their own strategies for the future. As the 80's's came to an end, the benefits of having centralised corporate databases was being promoted by a range of industry heavyweights. First and formost IBM and ICL with their DBMS software but also new upstarts such as Oracle and subsequently SAP. Whereas the concept was far from new, and indeed relied upon older mainframe technologies, businesses were far more open to the benefits of having databases and supporting applications than was the case of office automation. Vendors of database software and applications naturally targetted those corporations that valued the strategic centralisation of corportare data... the mainframe boys.

Wang and its VS customers were effectively locked out of this emerging marketplace.

10.   Single product companies

Wang was one of the last IT vendors to promote a multi-product strategy e.g. numerous business and revenue streams. From the late 80's onwards new IT vendors inevitable focussed on just one product line. Increasingly this would be software driven and able to work on the Windows PC platform. Some would succeed e.g. Lotus 123, only to be bought by one of the major IT vendors and subsequently disappear! TTMAR became the dominant exit strategy. Hardware became generic and all the proprietary vendors gradually disappeared. And finally.........

11. We won!

Finally, accepting that Wang eventually fell, and that there were many reasons which contributed to this outcome.... Wang won! Even today it is very rare for one guy to start a business and within 30 years to have progressed from a small workshop in downtown Boston to being a multi-billion dollar empire with vast premises not only in Lowell but with manufacturing and marketing locations around the world.

During this time Wang created wonderful employment for thousands of professionals, rewarded its shareholders handsomely, provided massive financial benefits for its customers and aided the success of numerous software houses.

I view the mid-80's as being the zenith of Wang.... never quite the same afterwards. This was before the introduction of email, the web, social networking, mobile phones and for technology to be accessible to everyone and no longer just something you use when you were at work.

Less than 1% of all businesses survive for more than 10 years. Less than 1% of these survivors progess beyond their initial product range. Of these less than 1% grow to be a $billion and international business. Wang was therefore simply a "one in a million" business!

Wang will never be forgotten by those who were truly privileged to work for the wonderful Doctor.