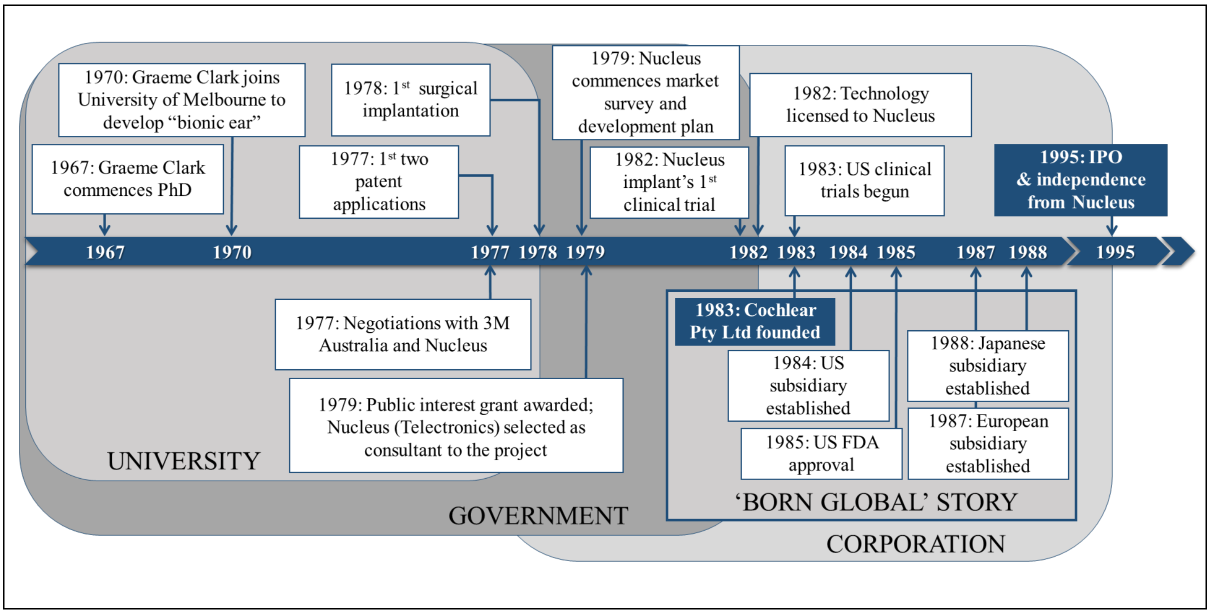
APPENDIX 1: COCHLEAR

Figure 1: Cochlear's relational origins



APPENDIX 2: DATA SOURCES

Table 2.1: Primary data sources | list of informants for 17 in-depth cases

Company	Number of informants	Informant's position
AC Rochester	1	managing director (1990-1997)
Austal	1	founder
Betatene	2	scientist-inventor and founder
Cochlear	6	scientist-inventor and five former senior managers at Nucleus and Nucleus companies
Fact International	2	two co-founders
Femcare	3	scientist-inventor and two trustees of Simon Population Trust
Food Spectrum*	1	founder, who also provided a copy of his self-published biography (correspondence)
Greencare*	1	distributor (correspondence)
Heartware	1	founder
Logitech	0	no interviews conducted but company history is well documented in existing case studies, written accounts by the key employees and interviews with the co-founder
Lonely Planet*	2	two co-founders of the Second Back Row Press, Lonely Planet's first distributor in Sydney
Mana*	1	founder
Momenta Corporation*	0	recordings of public presentations given by founder
Oxford Instruments	0	no interviews conducted but company history written by one of the founders consulted, as were transcripts of existing oral history interviews
Scitex*	1	president and CEO (1975-1992)
Tasmanian Alkaloids*	0	no interviews conducted as key individuals no longer alive but extensive company histories available
Turbine Components*	0	no interviews conducted due to sensitive nature of circumstances around company's closure but extensive accounts available from media and government policy documents
Total:	**22****	

* Eight cases did not become part of the in-depth sample presented in the paper.
**In total, 20 interviews were conducted and correspondence was exchanged with the remaining two informants.

Table 2.2: Data sources for case study revisits | complete set of companies from BG/INV samples (n=63)

Company	**News and media reports**	**Scholarly papers, books and monographs, including PhD thesis**	**Third party case studies**	**Personal archives of the founders and scientists**	**Internal company documents**	**Interview transcripts**	**Email correspondence with company founders, key employees and scientists**	**Public company documents and external reports**	**Videos and social media records**	**Total**
AC Rochester*	11				1	1	8	3	1	**25**
Agen Biomedical*	1							4	1	**6**
ANCA*	6							2	2	**10**
Ausonics*	4	1						2	1	**8**
Austal*	8	1				1		5	1	**16**
Australian Optical Fibre Research*	1								1	**2**
Betatene*	193			1	8	2	10	14	3	**231**
Camarao Brasiliensis		2	1							**3**
CIG Gas Cylinders*	12	1						2	1	**16**
Cochlear*	90	6	1	2	121	6	32	9	5	**272**
Conner Peripherals	60	3							1	**64**
Cowan Bowman Associates	12	4							2	**18**
Cryptologics International	14	2						10	12	**38**
Datacom Software Research	18	5							2	**25**
Ecofluid Group	22	2							1	**25**
EEsof GmbH	10	2							1	**13**
Exicom Australia*	3								1	**4**
Fact International	18	4	1	1	1	2	18	1	5	**51**
Femcare	9	4		1		3	12	3	6	**38**
Food Spectrum*	1			1			6	5	1	**14**
G.R. Davis*	1		1					1	1	**4**
Gateway Pharmaceuticals*			2							**2**

Company	News and media reports	Scholarly papers, books and monographs, including PhD thesis	Third party case studies	Personal archives of the founders and scientists	Internal company documents	Interview transcripts	Email correspondence with company founders, key employees and scientists	Public company documents and external reports	Videos and social media records	Total
GBC Scientific Equipment*	1	1						1	1	**4**
Greencare Industries*	10						5	3		**18**
Greencorp Magnetics*								1		**1**
Heartware		6	3			1	10		3	**23**
Huyck Australia*	1							2	1	**4**
International Investment Group		2								**2**
IXI	82	2							1	**85**
Knox International Trading*								1	1	**2**
Lasa	15	3							1	**19**
Logitech	18	7	2			1		3	2	**33**
Lloyd's Ships Holdings*	10								1	**11**
Lonely Planet*	76	6				2	5	2	5	**96**
Mana Systems	8	4				1	4	1	2	**20**
Mark Sensing*	1							2	1	**4**
Michaelis Hollander*									1	**1**
Midway Wood Products*								1	1	**2**
Momenta Corporation	80	4	3				1	4	2	**94**
Multistack International*	1							4	1	**6**
MYK International*									2	**2**
Oasis Group	56	2							1	**59**
Oceanfast*	31							2	1	**34**
Opals Australia*								1		**1**
Oxford Instruments		5	2						1	**8**
Pacific Malting*	4									**4**
QPSX Communications*	98	2							1	**101**

Company	News and media reports	Scholarly papers, books and monographs, including PhD thesis	Third party case studies	Personal archives of the founders and scientists	Internal company documents	Interview transcripts	Email correspondence with company founders, key employees and scientists	Public company documents and external reports	Videos and social media records	Total
Quality Heat Treatment*									1	**1**
Queensland Commodity Exports*	2								1	**3**
Safcol Seafoods*								1	1	**2**
Scitex	6	5	1			1	4	3	3	**23**
SGE International*	3	1					1	1	2	**8**
Signalling Technology*								2		**2**
Singatronics	26	2						1	2	**31**
SPEA Software	104	2					3		2	**111**
Tasmanian Alkaloids*	13		1						2	**16**
Techmar Jones		2								**2**
Technomed International SA	30	2							1	**33**
Technophone	6	3							4	**13**
Tiger Engineering*	6	1							2	**9**
Trace Scientific*	25							1	2	**28**
Turbine Components Australia*	15								1	**16**
Victoria Mouton*	1								1	**2**
Total	**1,223**	**99**	**18**	**6**	**131**	**21**	**119**	**98**	**104**	**1,819**

*Companies from the original McKinsey sample (39).

Our interpretation is based on sources available at the time of conducting this study. Sources used for reconstructing the histories of the original 63 firms varied significantly, both in terms of quality and quantity. In several cases we were able to access (excerpts from) personal archives of individuals and organizations (e.g., Betatene, Cochlear, Fact, Femcare, Food Spectrum), sometimes running to hundreds of individual records. Company- and industry-focused monographs (e.g., on Cochlear, Lonely Planet, Oxford Instruments) provided considerable detail on the companies themselves, as well as their socio-economic context. If companies did not grow, or folded within a short period of time, there were scant records left. We traced such companies via media reports, archives of closed websites and bankruptcy notices. We have been conservative in listing only the directly relevant and value-adding sources in the table above. We were particularly conservative in listing internet-based sources, limiting them to company websites and the social media records of the founders and key stakeholders.

APPENDIX 3: CLASSIFICATION OF BG/INV COMPANIES

Table 3.1: BG/INV companies and their relationships with incumbents | checked set of companies from BG/INV samples (n=47)

N	BG | INV company	Incumbent(s)[1]
(1) Parent-subsidiary relationships - *ownership & ongoing commitment*		
1	AC Rochester	General Motors
2	Agen Biomedical	Fielder Gillespie Davis; Mabco (previous name of Agen Biomedical)
3	Ausonics	Nucleus; licensing agreement with the Ultrasonics Institute (publicly funded research organization)
4	Australian Optical Fibre Research	Wormald International; Australian Government funding; Australian National University
5	CIG Gas Cylinders	Commonwealth Industrial Gases
6	Cochlear	Nucleus; licensing agreement with the University of Melbourne; Australian Government funding
7	Cowan Bowman Associates	Universal Data Systems, John Cowan (former employee of UDS) & Don Bowman (joint venture)
8	Datacom Software Research	Datacom Group
9	Eesof	California-based startup (name of parent not known)
10	Fact International	Trigon Plastics, John Blackham & Grant Wallace (joint venture)
11	Midway Wood Products	consortium of 16 sawmillers
12	Multistack International	Australia Pacific Resources & Ron Conry (joint venture)
13	QPSX Communications	Telstra & University of Western Australia (joint venture)
14	Scitex	Itek Corporation, Discount Bank Investment Corporation, Israel Research and Development Company & Efraim Arazi (joint venture)
15	Singatronics	City Development (Singapore)
16	Tasmanian Alkaloids	Abbott Laboratories & Ciech Polfa (joint venture)
17	Tiger Engineering	Wigmores; Caterpillar
18	Trace Scientific	Hambro-Grantham (minority investor); Australian Government funding
19	Turbine Components Australia	Rolls-Royce, Westintech Innovation Corporation, Circuit Technology Holdings & Clough Engineering (joint venture)
20	Victoria Mouton	Knox International Trading & Nichiro Fur Company (joint venture)
(2) Sibling relationships - *ownership & time-bound commitment*		
21	Austal	Star Boats (John Rothwell)[2]
22	Betatene	Cockajemmy (previous incorporation of Betatene) & Denehurst (Simon West - circulated resources and employees between companies from foundation)
23	Conner Peripherals	habitual entrepreneurs (Finis Conner & John Squires); CoData (founded by Squires); Compaq
24	Exicom Australia	Dequah (renamed to Exicom); acquisition of AWA's telecom business, including its international subsidiaries

25	Greencare Industries	Yartese (David Livingstone)
26	IXI	Acorn Computers (Hermann Hauser)
27	Lasa	Investment Group Bollore (Vincent Bollore)
28	Lloyd's Ships Holdings	Striker Boats Australia (renamed to Lloyd's Ships Holdings once acquired)
29	Lonely Planet	unincorporated partnership (Maureen & Tony Wheeler)
30	Momenta	Cirrus Logic (Kamran Elahian); Sequoia Capital & other investors
31	Oasis Group	habitual entrepreneur and investor (co-founder Robb Wilmot - also previously CEO of ICL)
32	Oceanfast	International Assets Group (management buyout)
33	SPEA Software	Mikron (Ulrich Seng); German Government funding
34	Technophone	Technotrend (Nils Martensson)
(3) Alliance relationships - *non-ownership & time-bound commitment*		
35	Femcare	Simon Population Trust
36	Logitech	Ricoh; BeZy & Polytech (Daniel Borel & Pierluigi Zappacosta)
37	Mark Sensing	The Royal Hong Kong Jockey Club; Mark Sensing was incorporated earlier under a different name (not known)
44	Technomed International	French National Institute of Health and Medical Research (INSERM); multiple shareholders (identities not known), including minority (10%) holding of the founder (Gerard Hascoet)
(4) Foster relationships - *non-ownership & ongoing commitment*		
38	Cryptologics International	National Semiconductor
39	Ecofluid Group	Incotex & Agrocons (state-owned companies in Czechoslovakia)
40	GBC Scientific Equipment	Commonwealth Scientific and Industrial Research Organisation (CSIRO); Varian-Techtron[3] (key industry player and previous employer of the founders)
41	Heartware	Dutch university (name anonymized at the request of interviewee)
42	Oxford Instruments	Clarendon Laboratory, Oxford University
43	SGE International	Imperial Chemical Industries
(5) No relationships identified		
45	Food Spectrum	n/a
46	G.R. Davis	n/a
47	Mana Systems	n/a

[1] Many companies in the sample had multiple inter-generational relationships enabling their foundation. When categorizing these relationships, we have selected the most important one, which we list first, followed by other relationships. For example, Conner Peripherals was started by the serial entrepreneurs Finis Conner and John Squires (i.e., sibling ventures existed and were the main incumbent relationship, with CoData, John Squires's venture, becoming the foundation for the new company) – these relationships we list first. But the venture also received equity as well as initial orders from Compaq – this relationship we list too.

[2] Names of habitual entrepreneurs/founders are provided in brackets.

[3] Unlike the other foster relationships, this was an example of involuntary fostering: thanks to the expiry of the CSIRO patent for the original invention, the founders were able to exploit the knowledge they acquired from their employment at the incumbent firm in order to produce a rival product.

Table 3.2: BG/INV companies without inter-generational relationships (n=3)

Company	Sample	Industry/ product	Country	Year of foundation & start of internationalization	Origins	Internationalization pathway
Food Spectrum	BG	Food stabilisers, dairy powder mixes/ food processing	Australia	Registered in 1980, Food Spectrum commenced international sales immediately after foundation.	At the time Food Spectrum was registered, its founder already had a long and successful career in the industry. He previously worked for multinational companies, including Unilever and British Tobacco, and served on several industry committees in Australia and internationally.	The company's international expansion was sporadic. Only after it was approached by the global fast-food chain McDonalds and formed a strategic alliance with it in 1982, was it able to experience growth in both Australian and Asian markets. Food Spectrum was acquired by the large publicly listed food company Kerry Group in 2012.
G.R. Davis	BG	Essential oils/ agribusiness	Australia	Founded in 1964, the exact date of first international sales is unknown.	Geoff Davis was managing director of the Sydney office of a large Perth-based essential oil company Plaimar. Following the death of Plaimar's founder, the company began to struggle. The Sydney office was closed and Davis lost his job. He established his own company, G.R. Davis, initially operating from the garage of his Sydney home. Several years later he bought a property in NSW and commenced his own production of eucalyptus oil.	The founder developed and employed an innovative mobile distilling vessel technique that mechanised the processes of harvesting and distilling of essential oil. This allowed the business to compete with producers in Portugal and Spain. However, it was the entry of Chinese producers into the market in the early 1980s that heavily impacted Australian production. Large quantities of cheap Chinese eucalyptus oil triggered diversification of the company into tea tree oil. Eucalyptus oil production remains the company's primary enterprise and the source of export income. G.R. Davis maintains a leading position in its market niche.
Mana	INV	Information technologies / software	New Zealand	Founded in 1979, Mana had its first international sales to Australia a year later.	The founder was able to launch a software startup based on his previous professional experience. The idea for the product arose while the founder was employed as a software engineer by Air New Zealand. The venture was able to benefit from government support in multiple ways, including a government startup grant and the first customer (regional authority).	The first 5 years of international sales were sporadic as the company made several unsuccessful attempts to find distributors in Australia and the US. Mana seized a short window of opportunity to become a software developer for Fujitsu in Australia. This collaboration grew into a development partnership and defined Mana's subsequent international path. However, once the partnership was dissolved, Mana was unable to recover. As a software startup from a small geographically remote market, Mana lacked options. Partnering with the closed platform of Fujitsu (vs. IBM's open one) limited Mana's subsequent growth prospects.