
Swissair and the Qualiflyer Alliance

02/2004-5186

This case was prepared from public domain sources by Dr. Mark Hunter, Senior Research Fellow at INSEAD, under the supervision of Dr. Yves L. Doz, The Timken Chaired Professor of Global Technology and Innovation and Professor of Business Policy. It is intended to be used as a basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

Copyright © 2004 INSEAD, Fontainebleau, France.

N.B. PLEASE NOTE THAT DETAILS OF ORDERING INSEAD CASES ARE FOUND ON THE BACK COVER. COPIES MAY NOT BE MADE WITHOUT PERMISSION.



Distributed by The European Case Clearing House, England and USA.
North America, phone: +1 781 239 5884, fax: +1 781 239 5885, e-mail: ECCHBabson@aol.com.
Rest of the World, phone: +44 (0)1234 750903, fax: +44 (0)1234 751125, e-mail: ECCH@cranfield.ac.uk.
All rights reserved. Printed in UK and USA. Web Site: <http://www.ecch.cranfield.ac.uk>.

The Logic of Qualiflyer

By 1998 it seemed clear that in air travel, “Competition is more between alliance groupings than it is between individual carriers,” as Swissair president and CEO Jeffrey Katz observed.¹ The member airlines of multi-carrier alliances now claimed some 53% of global air passenger traffic, and 80% of the profits. SAirGroup (which included Swissair) concluded that carriers that did not belong to a strong alliance were going to fail or be absorbed by larger airlines. Bigger European airlines, notably British Airways, Lufthansa and KLM, were taking the lead in building global alliances.²

SAirGroup was hoping that the first European airline network could transform Swissair’s current and future situation. Swissair was too big for Switzerland and too small for Europe. In a home market of only 7 million people, Swissair and its subsidiaries Crossair and Balair flew 14 million passengers annually – a far higher number relative to the country’s population than other national carriers could claim, and indicative of SAirGroup’s high through traffic. But its main hubs – Zurich, Geneva and Basel – even jointly could not handle as much traffic as airports like Heathrow (London), Schiphol (Amsterdam) or Roissy (Paris). More connections to more destinations made these rivals more attractive to the “through” passenger traffic on which Swissair depended. Besides, said Michael Eggenschwiler, Swissair’s executive vice president of external relations, “We’re suffering today from Switzerland not being part of the EU.”³ Flights to and from EU airports by non-EU airlines were more highly taxed than those of the Union’s carriers, and access to European hubs was limited for non-EU carriers. An alliance with Austrian Airlines had added Vienna as a hub, and the acquisition of 49.5% of the Belgian flag carrier Sabena in 1995 brought deep access to Brussels, but these did not add up to a European network.

Swissair also needed to drastically reduce its costs, which were among the highest in Europe. Management wanted nearly 30% reductions in costs by ASK (“available seat kilometers”, or seat capacity times distances flown) by 1999, without hurting Swissair’s reputation for extremely high-quality service and reliability.⁴ The growth of high-yield business on which Swissair depended had reversed with the 1990s recession, as lower-cost airlines and “no frills” start-ups cut prices and yields across the industry. Sharing such costs as ground services, ticketing, lounges and maintenance with alliance partners was an obvious response.

The Founding of the Alliance

In March 1998, Swissair and its partners – the former Belgian flag carrier Sabena, TAP/Air Portugal, Turkish Airlines (THY), France’s AOM, Crossair (a regional, mainly short-haul carrier), plus Austrian Airlines and its sister carriers Lauda Air and Tyrolean Airways –

¹ Tom Gill, “A Leadership Role.” *Airline Business*, July 1998. Unless otherwise noted, all quotes of Jeffrey Katz are drawn from this extended interview.

² See Exhibit 1, “Comparing The Qualiflyer, Oneworld and Star Alliances”.

³ Anon., “EU Outsider Finds Playing Field Uneven; Swissair Relies on Resourcefulness and Creativity to Stay Competitive”. *World Airline News*, 22 May 1998.

⁴ Op. Cit., Gill.

announced the founding of the Qualiflyer Group. Katz said that, like Swissair, they were all “quality-orientated smaller airlines looking by being together for strength and a multi-hub European network.” Joint marketing and sales operations, lounges and branding were among their first priorities. In 1997, Qualiflyer’s members had flown 47.5 million passengers to 294 destinations in 125 countries, and had a collective turnover of \$11 billion. That was about 4% of world market share, compared to some 16% for Star Alliance.

Qualiflyer’s main hubs included Zurich, Brussels, Vienna, Nice, Istanbul and Lisbon. Swissair said that they were big enough to ensure connections to virtually anywhere, but small enough to offer greatly reduced transit times compared to Heathrow or Roissy. AOM, though small in terms of revenues and destinations, brought access to Orly airport, a second platform for Swissair in Paris. TAP offered privileged access to Portugal, a fast-growing market with otherwise “restricted traffic access, so we can’t just fly wherever we want there,” noted Katz. Likewise, said Katz, Turkish Airlines was a large carrier with a strong grip on its market, as well as multiple routes into Central and East Asia and the Middle East. Most important, THY and TAP increased the collective home markets of the alliance from 25 to 97 million people.

Qualiflyer remained open to new members and new routes as well. In particular, the alliance would make the group more “attractive to potential partners in the US and Asia,” said Swissair executive vice-president and CFO Georges P. Schorderet.⁵ Qualiflyer included no US carriers, though Swissair, Austrian Airlines and Sabena had already formed a separate code-sharing⁶ alliance called “Atlantic Excellence” with Delta, the US carrier with the highest share of the transatlantic market. Swissair executives made it clear in public presentations that they expected Atlantic Excellence to merge into Qualiflyer.⁷ Unfortunately, the lack of “open skies” agreements⁸ between the US, Turkey and Portugal made that move impossible at that time. There was also public discussion that American Airlines, a partner with Sabena, might join Qualiflyer. On the Asian side, Singapore Airlines had recently pulled out of the Global Excellence alliance with Swissair and Delta. Swissair, arguing that no single Asian airline could offer sufficient access to the entire region, set up code-sharing alliances with Cathay Pacific, Japan Air Lines and Malaysian. SAirGroup President and CEO Philippe Bruggisser commented that “developing one front while keeping the others going today is the way of the world in the alliance landscape.”⁹

⁵ Tom Gill, “Swiss Qualify New Partners.” *Airline Business*, May 1998.

⁶ “Code-sharing” was and remains the most common form of airline alliances. It involves sharing flight numbers among two or more carriers, so that each can book the other’s flights. This increases the chances that a given flight will appear on a travel agent’s or Internaut’s screen.

⁷ See Philippe Bruggisser, “The Power of SAirGroup Alliances,” *Schloss Fuschl*, 21 March 1998.

⁸ The “open skies” era is generally dated from 1992, when the US Dept. of Transportation exempted the KLM-Northwest alliance from antitrust regulations under a treaty with Holland that granted both carriers immunity from prosecution in exchange for access to their domestic hubs. “Open skies” became US government policy, and bilateral treaties were signed with about 50 countries.

⁹ Pierre Sparaco, “Swissair Expands Partnership Network”. *Aviation Week and Space Technology*, 23 August 1999.

Cutting Costs and Widening Markets

Major cost reductions would be possible if Qualiflyer partners used the same airplanes. Said Katz, "We now have a group which can invest in the same concept. So what in the past cost us a dollar might cost us a fraction of that now, especially where it requires a fixed investment or a fixed operation." Swissair planned to buy no fewer than 203 aircraft over the next decade, 80% of them from Airbus and the rest from Boeing and its subsidiary McDonnell-Douglas. It encouraged its allies, starting with Sabena, to invest in mainly Airbus fleets too – by outright purchase or by leasing them from Flightlease, a company owned partly by SAirGroup.¹⁰ However, partners such as THY and Lauda had mainly Boeing fleets, and both THY and TAP earned substantial and growing revenues from maintenance on Boeings. Nonetheless, use of similar aircraft also meant reduced pilot training costs, greater flexibility in pilot schedules, and more efficient maintenance and ground services.

In general, the longer a flight, the more unit costs decline. Thus, said Katz, "In engineering the [Qualiflyer] network, you'll see us push more to longer hauls and to get more utilisation out of the airplanes." That meant harmonizing route schedules and cutting some flights, though at the risk of labor unrest among pilots. Said Katz, "The information flow is improving among labor [unions] in our alliances, just as among other airlines."

Coordinating and combining ground services like catering, cargo, baggage handling and sales offices could further reduce labor, real estate and purchasing costs for the alliance while boosting quality. Swissair pushed for the development of a ground services company to be jointly owned by all Qualiflyer members, and also offered to sell them equity shares in its non-airline subsidiaries. In 1997 these subsidiaries – SAirRelations, SAirServices, and SAirLogistics – set up as separate profit centers,¹¹ had accounted for 47% of SAirGroup's revenues. (See Exhibit 3, "SAirGroup's Non-Airline Subsidiaries.") SAirServices (aircraft maintenance and ground handling, plus IT for ticketing and reservations) had an EBIT margin of 7%, the best of any division. A sharp exception to its growth was Atraxis, a unit which made airport management software. Atraxis's applications were developed in Switzerland, where airport managers and airlines worked together to build IT infrastructure. Where that wasn't the case, sales lagged, Atraxis managers discovered.¹² At least one Qualiflyer member balked at using Atraxis.

SAirGroup also invested in its partners' non-airline subsidiaries. After THY sold its 40% stake in Havas, the state-owned ground handling company, to a private-sector firm in April 1998, the stake was resold to Swissair. An analyst commented, "It is noteworthy that

¹⁰ SAirGroup owned 50 % of Flightlease; the other half was held by GATX Capital Corp., a subsidiary of a group with numerous investments in transportation-related companies. By 1999, all of Sabena's aircraft "acquisitions" were done through leasing, principally from Flightlease. See Jo Pearce and Jackie Gallacher, "A Touch of Swiss Prudence". *Airline Business*, July 1999. Flightlease soon acquired 38 mid- and long-range Airbus aircraft at a cost of \$5.2 billion, mainly for Swissair and other members of Qualiflyer. See William Hall, "Flightlease order for Airbus Industrie". *Financial Times*, 21 September 1999.

¹¹ Swissair's Qualiflyer partners, notably Austrian Airlines, TAP and THY, had similar operations, but placed them mainly within centralized, functional structures.

¹² Such IT is used for tasks like departure control, stand- and gate-allocation, baggage verification and tracing, computerized reservation system revenue accounting, cargo logistics and catering management. See Anon., "Coordination Please". *Aviation Week and Space Technology*, 20 October 1997.

Swissair indirectly takes part in Turkey's ground handling, airline catering, terminal restaurants, domestic flights and international flights businesses."¹³

Deepening the Alliance Ties

Very quickly, Swissair set about buying minority stakes in seven of the 10 companies that eventually joined Qualiflyer. Besides its 49.5 % stake in Sabena, Swissair soon acquired 49% of AOM, and 10% of Austrian Airlines, which acquired a similar stake in Swissair. (Delta and Swissair had also purchased small stakes in each other's equity.) A SAirGroup spokesman explained: "If we are linked we can collaborate in depth."¹⁴ Another reason, said Swissair's Schorderet, was that "if you want a partner in Europe, it is necessary to take an equity stake - it confirms your commitment." But fears that Swissair sought dominance rather than deeper collaboration and commitment surfaced loudly in Portugal and Turkey, where TAP and THY were nearing privatization. While open to a Swissair bid, the Portuguese state announced it would maintain a blocking "golden share" in TAP. In Turkey, a prominent parliamentary deputy warned that "THY will be absorbed into a corporation dominated by Swissair. This must never be permitted."¹⁵ If Qualiflyer proved a success, however, such protests would surely diminish.

Partner Profiles of the Qualiflyer Alliance

(For comparative basic data, see Exhibit 2, "The Main Qualiflyer Partners at a Glance".)

Swissair, Crossair and Sabena: Growing Past Danger?

SAirGroup's \$US7 billion in revenues (including \$US3.4 billion for its airline division Swissair alone) represented about two-thirds of the total revenues of the Qualiflyer airlines. Swissair carried nearly 11 million passengers in 1997, with a moderately good seat load factor (the average passenger capacity used on every flight) of 70.5%. The airline had Europe's highest ratings for quality service, and banked on it. While other airlines, including Austrian and Delta, moved to business and economy classes, to gain higher yields Swissair invested in more first-class seats.¹⁶ Meanwhile, to avoid the possibility that competitors with wider reach and resources would absorb or subjugate Swissair, management embarked on a wave of acquisitions, beginning with 49.5 % of the troubled Belgian carrier Sabena in 1995.

Sabena brought Swissair a complementary route network in Africa and access to the major EU hub of Brussels. However, Sabena and its subsidiaries (Sobelair, DAT and City Bird) were notoriously overstaffed, with 11,300 workers for revenues of \$US1.94 billion in 1997. The Belgian state held one-third of the capital, which meant that restructuring would encounter potent political obstacles. Swissair also acquired Crossair, a highly profitable

¹³ Auerbach Grayson (analyst's report), "Turkish Airlines", 23 September 1998, p 2.

¹⁴ Simon Montlake, "TAP stake is latest step in tightening Qualiflyer". Air Transport Intelligence, 1 April 1999.

¹⁵ Anon., "THY Privatization harmful". Turkish Daily News, 18 November 1998 (via Lexis-Nexis).

¹⁶ Anon., "Swissair Banks On Improvements". World Airline News, 5 March 1999.

regional airline based in Basel-Mulhouse-Freiburg, flying small jets to secondary destinations like Bordeaux and Leipzig, as well as feeder lines to Swissair's main Geneva and Zurich hubs. Swissair hoped to own controlling minority shares in TAP, THY and AOM.

AOM: A New Hub but Shallow Pockets

Founded in 1989 as Air Outre Mer ("Overseas Air"), AOM specialized in carrying passengers between continental France and about a dozen destinations in its sun-kissed overseas departments. By the mid-1990s the company also operated a network in the south of France, flying to Nice, Marseille, Toulouse and Perpignan from its hub at Paris-Orly, as well as to Zurich. Despite high quality ratings and the launch of new business class services, AOM's dependence on vacation flyers and frontal competition with Air France hurt revenues. Yields were low – about 60% of Swissair's revenue-per-passenger – and the company was also overstaffed, with 2,883 employees compared to 7,335 for Swissair. About half of AOM's 27-plane fleet, and the most recent half, was equipped by Boeing and its subsidiary McDonnell-Douglas. The other half, consisting of older McDonnell-Douglas DC-10s, would have to be renewed soon. Solving any or all of these problems would require new capital.

Austrian Airlines, Lauda Air, Tyrolean: Mediators between East and West

The Austrian Airlines Group saw itself as the trust-builder in Qualiflyer, promising total commitment to the alliance as well as fierce resistance to "the threat of dominant partners". Even more than Qualiflyer, it considered the Atlantic Excellence group central to long-term strategy. Pride in its product and its position as the leading airline in central Europe (with \$US1.9 billion in revenues and 3.9 million passengers in 1997) was extremely strong. Through its controlling shares in Lauda and Tyrolean, Austrian Airlines (AUA) possessed low-cost leisure and regional wings. The group owned a fleet of 82 aircraft, about half of which consisted of Airbus planes, with the rest divided among Boeing, McDonnell-Douglas, Fokker and Canadair. AUA planned to replace its American-made planes with Airbuses. Like Swissair, AUA possessed subsidiaries in every aspect of ground and maintenance operations – and like Swissair, its operating costs per ASK were about 20% higher than European competitors like British Airways or Lufthansa. Majority-owned by the state, the airline dominated its home hub of Vienna to an extraordinary degree,¹⁷ with 58% of passenger throughput in 1997. Unlike most European hubs, Vienna was expanding – and meanwhile passenger traffic, cargo and charter revenues were growing steeply as AUA's Eastern Europe flights and destinations multiplied.¹⁸ AUA had collaborated with Swissair since the 1970s on technical flight operations, but integration of reservation and sales systems in the 1990s proved more difficult.

¹⁷ AUA's position was so strong that it was able to drive no-frills carrier Virgin Express out of its home market in the mid-1990s.

¹⁸ Eastern European destinations went from 8 to 31 from 1989-1997, and weekly flights to the region increased from 43 to 167 from 1992-97. No other European carrier offered as many flights or destinations in the region. Source: Merrill Lynch, "Austria Airlines," 9 October 1998, pp. 18-19.

TAP/Air Portugal: The Strain of Growing into Europe

Since 1991, the number of passengers TAP flew had grown by over a third, to 4.3 million, and net assets had doubled since 1993. In 1997 the company showed a profit after 13 years of losses. Maintenance revenues grew by a massive 33.7% from 1996 to 1997, a sign of the confidence other companies placed in TAP. TAP also signed an agreement for the purchase of 18 medium-haul Airbuses – about half its fleet – and prepared to retire its 15 Boeings and “uniformize” its aircraft. However, raising the quality of the product was hard: operating costs shot up nearly 12% from 1996 to 1997, driven by staff costs and supplies and external services. The state-owned company cut its employee base for the fifth straight year, as on-time departures declined to a five-year low of 80%.¹⁹ TAP was preparing to privatize in a program monitored by the European Commission, amid a long and worsening dispute with its 450 pilots over pay and working conditions.

THY/Turkish Airlines: The Long Road to Privatization

THY's passenger total of 10.4 million passengers for 1997 was barely second to Swissair, and its seat load factor of over 80% was impressive – but revenue was only \$US1.35 billion, 40% of the sales of the Swiss carrier. Domestic operations dragged down its yield-per-passenger, and were first on the list of assets to be sold off when THY was privatised. Privatization of the state-owned carrier had been promised since 1990 but had never been accomplished, not least because powerful military and political interests had close informal alliances with and interests in THY. The company offered the most important aircraft maintenance services in its region, with 255 licensed engineers specialized in airframes and engines, and particularly experienced in older Airbus A-310s – of which the company owned 14 – and Boeing 737s.²⁰ In October 1997 THY announced it was buying an additional 49 B-737s – 26 immediately, with an option on 23 more.

¹⁹ Total employees declined steadily from 10,199 in 1993 to 8,307 in 1997. Annual Report and Financial Statements 1997, “Key Figures” (page numbers blank).

²⁰ In fact, THY possessed a flight simulator for the B-737. See “3rd-Party Maintenance Directory - Turkish Airlines”. Flight International, 24 January 1996.

Exhibit 1

Comparing The Qualifyer, Oneworld And Star Alliances

Alliance (founded)	QUALIFLYER (3/98)	STAR (end 1997)	ONEWORLD (2/99)
Members	Swissair, Austrian, Lauda, Sabena, TAP/Air Portugal, THY, AOM, Crossair, Air Littoral, Tyrolean Airways = 4% global market share.	Lufthansa, United, Air Canada, SAS, Thai Airways, Varig = 16% global market share.	American, BA, Canadian, Cathay Pacific, Qantas = 10% global market share.
Alliance Leader	Members have putative equal status, but Swissair is clear alliance driver and by far the largest member.	All members have equal voting rights, and leadership on some issues is given to smaller members to reinforce commitment.	All members have equal voting rights.
Initial Governance structure	Steering committee under presidents, with reps from mainly larger partners (Swissair, Austrian, Sabena, THY, TAP). Functional working groups are chaired mainly by Swissair.	"Virtual" organization of committees with reps from each partner. Advertising agency serves as alliance marketing dept.	Chief executives decide on strategy. Quickly move to separate, central management structure.
Codesharing/joint sales	Yes; "harmonization" of fares "within the respective home markets" is planned. Frequent flyer program harmonization is a priority.	Yes; partners set own fares, and frequent flyer miles are harmonized.	Yes; members launch successive promotions ("passes") for network.
Route linkages	Each partner keeps its national routes. Routes are ceded by subsidiaries within partners.	Members cede certain unprofitable or uncompetitive routes to each other.	Progressive harmonization and rationalization planned.
Alliance branding "group identity and"	Workshop to address devices are introduced philosophy" planned for 1999, to be followed by training for managers then staff.	Common branding ("Oneworld benefits") sequentially, after negotiation among members.	Joint branding is key focus from start; intensive training of member staffs.
Cross-ownership	Swissair owns up to 49% of some partners, wishes to buy shares in all partners; Turks and Portuguese pose tough conditions.	No partner can own more than 5% of another.	Tolerated but not required.

Exhibit 2 (Cont'd)

Alliance (founded)	QUALIFLYER (3/98)	STAR (end 1997)	ONEWORLD (2/99)
Shared ground Facilities and teams	A separate company, Qualiflyer ground services, is created with equal equity from each partner. Group announces that this "will make for job redundancies in certain areas" but denies layoff targets.	Baggage, check-in and other services are provided by members to each other on home-country basis.	Cost pressures induce progressive combining of services among members.
Common fleets	Swissair sees all-Airbus fleet as major advantage; THY, AOM, Lauda, Sabena and Austrian have significant (and recent) investments in Boeings	Not planned.	Not planned.
Common lounges	Most concern is with lounge standards, which vary among members	Open to discussion; but members want to keep lounges as distinctions.	Key focus of alliance promotion and branding.
Common purchasing	Swissair sees this as crucial cost advantage and wishes to accelerate.	Partners place purchasing after branding.	Partners begin with branding but move quickly to purchasing

Exhibit 2
The Main Qualifyer Partners at a Glance (1997)

	Swissair	Sabena	Austrian	TAP	Turkish
Founded	1931	1923	1957	1945	1933
Hubs	Zurich Basel	Brussels	Vienna	Lisbon	Istanbul
Network	156 cities, 79 countries; EU Access issues	94 cities, 44 countries; Africa and Europe key	67 cities, 51 countries; central/east Europe key	54 cities, 30 countries; Brazil, Angola but no US "open sky"	97 cities, 45 countries; Mid/Far East, No US "open sky"
Subsidiary Airlines	Crossair, Balair	Sobelair, City Bird, DAT (cargo)	Tyrolean, Lauda Air	---	---
Fleet	65 total, 44 Airbus	80 total, 7 Airbus	34 total, 10 Airbus	31 total, 21 Airbus	65 total, 19 Airbus
Passengers	10.8M	6.9M	3.9 M	4.3 M	10.4 M
Workforce	7,335	11,300	4,160	8,307	8,958
Revenues ²¹	\$7 B (group)	\$1.9 B (group)	\$1.2 B	\$1 B	\$1.35 B
Profit	\$270 M	(\$57 M)	\$45 M	\$48 M	\$26 M
Margin	6.2 % (EBIT)	---	2.9 % (EBIT)	---	2 % (Net)

²¹ Revenues, profits and margins are for groups.

Exhibit 3

SAirGroup's Non-airline Subsidiaries

<p>SAir Services 1997 revenue: \$1.2B (17.1% of group); EBIT margin of 7.0% is highest in group.</p> <p>Key Units:</p> <p>SR Technics Overhaul/maintenance \$700M revenues, margin (EBIT) 6.2 %; 52 % of business is servicing Swissair</p> <p>Swissport Ground handling \$285M revenues, margin 6.5%; hopes for EU liberalization</p> <p>atraxis IT solutions \$175M revenues, margin 0.8%; trouble expanding</p> <p>aviReal Real estate \$122M revenues, 13.7% margin Serves SAir Group, Emphasis on cargo hub</p>

<p>SAir Relations 1997 Revenue: \$2.5 B (35% of group) Growth rate of 40 %</p> <p>Key Units:</p> <p>Gate Gourmet Inflight catering \$975M revenues, margin 8.9% #2 worldwide in sector, Present in 84 countries</p> <p>Nuance Duty-free retail \$1.03B revenues, 5.9% margin #3 worldwide in sector; In acquisition mode</p> <p>Swissôtel Hotel operator (17) \$260M revenues, 5.9% margin Revenues rising fast; Present on 4 continents</p> <p>Railgourmet RR catering in Europe \$119M revenue, 3.9% margin Margins fall while revenues rise via acquisitions</p>

<p>SAir Logistics 1997 Revenues: \$814M (11.6% of group) Low margin (3.5%) but high ROIC (35%, highest in group)</p> <p>Key Units:</p> <p>Swisscargo Sells group freight capacity \$619M revenues, 3.0% margin Tripled sales via Sabena and new plane acquisitions</p> <p>Jacky Maeder Freight forwarder \$190M revenues, 1.4% margin Leader in Switzerland 16% revenue rise</p> <p>Cargologic Distribution coordination and tracking services (IT), warehousing Revenue \$80M, margin 6.7% Near completion of highly Automated cargo hub</p>

Source: Adapted from Crédit Suisse/First Boston, « SAirGroup », 10 July 1998.

To order INSEAD case studies please contact one of the three distributors below:

The European Case Clearing House (ECCH)



www.ecch.cranfield.ac.uk
Tel: 44 (0) 1234 750 903
Fax: 44 (0) 1234 751 125
E-mail: ECCH@cranfield.ac.uk



www.ecch.cranfield.ac.uk
Tel: 1 781 239 5884
Fax: 1 781 239 5885
E-mail: ECCHBabson@aol.com

Centrale des Cas et de Médias Pédagogiques



www.ccip.fr/ccmp/
Tel: 33 (0) 1.55.65.64.44
Fax: 33 (0) 1.40.54.06.93
E-mail: Ccmp@ccip.fr

INSEAD

Boulevard de Constance, 77305 Fontainebleau Cedex, France.
Tel: 33 (0)1 60 72 40 00 Fax: 33 (0)1 60 74 55 00/01 www.insead.edu

1 Ayer Rajah Avenue, Singapore 138676
Tel: 65 6799 5388 Fax: 65 6799 5399

Printed by INSEAD