

## **Borealis Software Case Study**

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*This case study details the potential acquisition of Borealis Software by two entrepreneurs. It is intended to be used as an in-class case study in an Entrepreneurial Finance course, after pro formas and valuation have been covered, to illustrate normalizing and projecting financial statements to arrive at an estimate of future firm value. Students are asked to use the financial information given to create their own financial projections for Borealis should the entrepreneurs make the acquisition. Students can then decide whether the company is worth purchasing for the \$12 million asking price.*

### **INTRODUCTION**

It was February 2007, and Chris Mackey and Dan Smith had just signed a letter of intent to purchase Borealis Software, Inc., a 25-year-old company located in a suburb of Minneapolis, Minnesota. They had been pouring through documents, conducting interviews, performing secondary market research, and myriad other tasks in their due diligence. They were currently analyzing company data they had compiled in preparation for a presentation to their private equity investor on the financial attractiveness of the acquisition. A big part of this task involved interpreting the numbers that were provided by Borealis along with making assumptions about how these numbers may change if they were to take over and operate the company. They would have to be able to defend their analysis in their presentation.

### **BACKGROUND**

Chris Mackey started his career in 1983 as an intern for Net60, a local software firm. At the time, Chris was pursuing his undergraduate degree from the University of St. Thomas in St. Paul, Minnesota. He stayed with the company after graduating in 1986, eventually moving from a programmer position to manager. He got in at the ground level of the company, and was part of its growth from 40 to 400 customers during these early years.

In the mid-1990's, Chris went back to St. Thomas to pursue his MBA. He also moved up to executive roles, first becoming Director of Business Development and then President and CEO. During Chris' tenure as President and CEO, the company changed its focus to supply chain management software and grew from \$8 million in revenue to \$34 million in 2003, when it was acquired by 3M. Chris continued in the President and CEO role until 2006 and the company continued to grow at a 25% annual growth rate.

Dan Smith had spent his career in finance roles for various firms. He spent ten years as an accountant for Deloitte & Touche, and then moved into finance at Honeywell. One of his positions at Honeywell was CFO of a \$1.8 billion business unit that undertook several acquisitions. He left Honeywell to become CFO of Contingency Software, which was sold in January 2003 for \$160 million. He then joined Net60, where he and Chris worked together for the first time and helped to lead Net60 in the 3M acquisition (see Exhibit 1 for Net60 operational performance).

## **THE NEXT VENTURE**

After their post-acquisition commitments to Net60 were up, Chris and Dan discussed teaming up on “the next venture.” From their experience in pursuing acquisitions at Net60, they had noticed a trend toward consolidation in the software industry. However, private equity firms needed to deploy too much money to take an interest in smaller software firms with less than \$20-25 million in revenues. With over 11,000 software firms under \$20 million in revenue, they believed there was ample opportunity to pursue a consolidation strategy with smaller software firms. They could acquire 3-4 smaller software firms in a similar vertical market, resulting in revenues over \$50 million and a potential exit to a private-equity or strategic buyer. They believed that such a sale would command a price of between 8 and 14 times EBITDA.

In early 2007, they formed NextMove LLC, which would be the entity that would search for and acquire each firm. They approached a large capital firm, with whom Chris and Dan had established a close professional relationship, to fund the search. The firm invested \$1.98 million in preferred stock, and Chris and Dan were in business (see Exhibit 2 for deal summary).

## **BOREALIS SOFTWARE**

At the time they were forming NextMove, Chris and Dan were introduced to Borealis Software through an investment bank they had approached in beginning their search. Borealis had been founded in the mid-1980’s and the founder was now 65-years-old and looking to retire. After an initial look at the business, Chris and Dan submitted a letter of intent to purchase the stock of Borealis for approximately \$12 million. This equated to about 1x revenue and 2x recurring revenue, which was low for software firms in general, but fairly consistent with acquisition multiples for very small, mature software companies (see Exhibits 3-8 for select data on Borealis).

Borealis sold Computer Telephone Integration (CTI) software to specific vertical markets, with its main focus on the healthcare industry. Borealis’s CTI software unified telephone, paging, and computer information systems, and provided emergency notification and response capabilities. The software enabled organizations to reduce call center staff by 50% and to increase customer service via aspects such as increasing the likelihood of finding on-call staff.

Chris and Dan were immediately attracted to Borealis’s market space. The CTI market was approximately \$100 million, large enough to make money, but too small to attract large competitors like Cisco. Borealis was one of four market leaders, none of which held a dominant position. Healthcare organizations, and hospitals in particular, were what Chris and Dan referred to as “sticky”: they were unlikely to switch communications systems.

Borealis had 80 employees and was on pace to generate \$12 million in revenues for fiscal year 2007 (year ending May 2007). The company had approximately 200 active customers, with the top ten customers accounting for 31% of revenues, and a 99.5% customer retention rate. Borealis generated revenue through four activities: 1) Software licensing, which included Borealis products and the resale of third party software; 2) Services, which included software installation and training; 3) Maintenance/Customer Support; and 4) Equipment. Its software consisted of four main products:

- Smart Console: Smart Console was the company’s main operator automation product, providing caller information on the operator’s computer screen for incoming calls, complete directory information, and single-button transfers. This product represented 50% of software revenue.

- Smart Web: This product allowed people to find information for themselves via the web rather than contacting an operator. Directory information from the same database used by all Borealis applications was accessible through this platform. Smart Web represented 25% of software revenue.
- Smart Speech: This was a voice-recognition product that allowed incoming calls to be answered by the system rather than a live operator. The system could then direct callers to the proper extension without human intervention. Smart Speech represented 15% of software revenue.
- eNotify: This product was an emergency notification system in which users in a pre-defined group could be notified in a particular emergency situation. This product represented 10% of software revenues.

Despite the company's success, it had inconsistent growth and profitability and was performing less than optimal in many areas. There had been little in the way of software releases and no upgrades over the previous three years. The different software products had little consistency, with different looks and fonts. Additionally, although the company did not track expenses by revenue stream, it appeared by Chris' and Dan's estimates to be losing money on its professional services segment; from their due diligence, they attributed this to the company performing a significant amount of post-installation service for free rather than billing customers for it (see Exhibits 5 and 6). At the same time, these presented opportunities for Chris and Dan to add value if they were to take over the business.

#### GO FOR IT?

All of this had happened very quickly, and Chris and Dan wondered if this was the right opportunity or if something better might come along if they waited. Right now, their task was to figure out what the company might look like moving forward if they were to take over. Could Borealis alone provide an attractive return on \$12 million in equity, even if they were unable to make subsequent acquisitions in this industry? And what upside existed if they could execute their consolidation strategy? Was this better than potential alternative acquisitions they might find?

#### EXHIBIT 1 SELECTED NET60 OPERATING RATIOS

<b>Revenue Source</b>	<b>% of Total Revenue</b>
License	24.3%
Services	39.1%
Maintenance	18.4%
Hardware	18.1%
<b>Cost of Sales</b>	<b>% of Rev. Source</b>
License	4.3%
Services	68.3%
Maintenance	16.9%
Hardware	80.6%
<b>Operating Expenses</b>	<b>% of Total Revenue</b>
Product Devt	12.4%
Sales	14.2%
Marketing	6.7%
G&A	4.1%
Total Operating Expenses	37.3%

**EXHIBIT 2  
CIBC DEAL SUMMARY**

	Total Investment	Ownership %	Type
CIBC	\$1,980,000	79.2%	Preferred Stock
Management	\$20,000	0.8%	Preferred Stock
Carried Interest Pool		20.0%	Common Stock

**EXHIBIT 3  
BOREALIS PAST INCOME STATEMENTS**

\$ (000)	FY05	FY06	FY07	
			8 Months	12 Months (est.)
Gross Sales	9,474	11,915	7,778	13,255
Net Sales	8,668	11,027	7,145	12,355
Growth Rate		27%	6%	12%
Gross Profit	5,235	7,073	4,354	7,810
Gross Profit %	60.4%	64.1%	60.9%	63.2%
Operating Income	(929)	660	49	899
Operating Income %	(10.7%)	6.0%	0.7%	7.3%
EBITDA	(631)	1,000	289	1,259
EBITDA %	(7.3%)	9.1%	4.0%	10.2%

**EXHIBIT 4  
BOREALIS PAST BALANCE SHEETS**

\$ (000)	5/31/05	5/31/06	1/31/07	Est. Closing 2/28/07
Cash	1,512	1,680	2,397	1,887
Accts Receivable	1,767	2,780	2,465	2,464
Inventory	429	419	677	675
Other Current Assets	157	237	307	295
Total Current Assets	3,885	5,116	5,846	5,321
Net Fixed Assets	591	615	688	688
Other Assets	74	36	45	59
Total Assets	4,530	5,767	6,579	6,068
Current Debt	71	152	109	0
Accts Payable	211	238	287	250
Accrued Income Taxes	-	38	20	20
Accrued Liabilities	257	323	269	300
Due to Call Connect	216	216	102	102
Customer Deposits	1,296	1,606	2,381	2,400
Deferred Income	3,208	3,406	3,334	3,636
Total Current Liab.	5,259	5,979	6,502	6,708
Long-Term Debt	83	66	148	0
Owners' Equity	(812)	(278)	(71)	(640)
Total Liab. & OE	4,530	5,767	6,579	6,068

**EXHIBIT 5  
BOREALIS REVENUE BY CATEGORY**

\$ (000)	FY05	FY06	FY07	
			8 Months	12 Months (est.)
License	3,450	4,723	2,648	5,473
Growth Rate	(35%)	37%		16%
Services/Training	1,496	1,953	1,211	1,881
Growth Rate	(23%)	31%		(4%)
Maintenance	3,670	4,431	3,329	5,109
Growth Rate	20%	21%		15%
Equipment	858	808	379	792
Growth Rate	(45%)	(6%)		(2%)

**EXHIBIT 6  
BOREALIS COST OF SALES BY CATEGORY**

\$ (000)	FY05	FY06	FY07	
			8 Months	12 Months (est.)
License	256	357	231	468
Services/Training	1,900	2,284	1,772	2,752
Maintenance	678	720	520	780
Equipment	599	593	268	545

**EXHIBIT 7  
BOREALIS EXPENSE ADJUSTMENTS**

\$ (000)	FY06	FY07 – total (est.)	Projected Expense
Owner Salary/Bonus/Benefits	461	892	240
Trade Show Expenses	150	120	75
Legal Fees	130	130	100
Hiring Expenses	100	85	65
Consultant Expense	0	20	0
Marketing Brochures	0	10	0

**EXHIBIT 8**  
**BOREALIS SALES BY CUSTOMER**

Customer	FY06 (000's)	%
A	775	7.03%
B	430	3.90%
C	357	3.24%
D	336	3.05%
E	333	3.02%
F	289	2.62%
G	251	2.28%
H	232	2.10%
I	211	1.91%
J	211	1.91%
Total Top Customers	3,425	31.06%

**TEACHING NOTE**

**Purpose**

This case was written to fill a gap in case studies for entrepreneurial finance courses: one that puts students in the position of projecting financials to make a decision. The case provides financial details for a software company that two entrepreneurs are looking to acquire, and students are asked to normalize and project financials and to project an exit value to assist them in evaluating the opportunity. A major point of learning for students is in the fact that there are many directions they can take in their projections, so they are forced to make their own assumptions. This is a level of ambiguity with which most students are unfamiliar and uncomfortable, and it provides the instructor an opportunity to demonstrate how approach is more important than coming up with the “right” answer.

**Case Questions**

1. Using the information given in the case along with the estimated 2007 income statement numbers, prepare an adjusted/normalized 2007 income statement for Borealis. What is the EBITDA multiple based on your adjusted EBITDA?
2. Using the information given in the case, project five years of income statements using the Excel spreadsheet. What assumptions did you use?
3. Estimate an exit value in Year 5. What is the total accumulated cash over the five-year period? At a \$12 million purchase price, what is the projected IRR?
4. Should Chris and Dan move forward with the acquisition? Why or why not?

**Classroom Strategy**

An effective strategy for this case is to have students read the case before class and then work in groups for 45-60 minutes during class to do the analysis. It is best to provide students with an Excel spreadsheet template (see Exhibit TN-1; this is an example of a completed spreadsheet, but the instructor can easily create a blank spreadsheet in Excel with just headings and no numbers). However, the instructor should give few instructions at the beginning of class on how to approach making adjustments to the 2007 income statement and developing pro formas. It will generally take the groups ten or fifteen minutes (along with a question or two for the instructor) to figure out the approach they will take. The instructor can monitor progress and leave about 30-40 minutes to go through the projections and other discussion points with the class. Instructors can expect to spend approximately 75-90 minutes total on the case if it is done as an in-class case study.

## Case Analysis

There is a lot of information given in the exhibits, some of which is relevant to this analysis and some of which is not. This is intentional, as it gives students the challenge of sifting through the numbers, just as they would have to do if they were performing due diligence on an actual acquisition target. Additionally, it is important to point out to students (even before they begin their analysis) that there isn't one correct answer; it is their approach that is important. To that end, the analysis that follows in this teaching note provides one set of assumptions and the logic behind them, but instructors and students can certainly come up with and justify other approaches as well.

### *Question 1: Adjusted/Normalized 2007 Income Statement*

Looking at the exhibits in the case, the two most glaring adjustments that need to be made are in the gross margin on Service (Exhibits 5 and 6) and in the Operating Expenses (Exhibit 7). From their previous experience at Net60 (Exhibit 1), Chris and Dan knew that software firms should generate an approximately 30% margin on service. What Chris and Dan found in their due diligence is that Borealis was that they didn't realize they were losing money on this; they were simply not charging for most post-installation service even though the expense of service was being incurred. While this would take time to correct, they thought they could eventually do so. Pricing service to generate a 30% margin on \$2,752,000 of costs would increase the service revenue from \$1,881,000 to \$3,931,000 (see TN-1).

Looking at Exhibit 7, Chris and Dan expected to reduce operating expenses by \$777,000. This is something that can take immediate effect if they go ahead and purchase the business. The instructor can note here how common it is in small business for an owner to either over- or under-compensate herself/himself and accumulate other expenses that would not be there with more professional management in place. These added expenses essentially reduce the acquisition price by decreasing EBITDA.

Together, these adjustments would increase EBITDA by about \$2.8 million and EBITDA percentage from 10.2% to 28.4%, which is far closer to the 34% average among software firms noted in the Stern School of Business study on margins<sup>1</sup>. At an EBITDA of \$4 million, the acquisition multiple goes down from 12 to 3, indicating the potential for Chris and Dan to create significant value in Borealis simply by implementing changes in pricing and spending to reflect more normal industry practices.

Of course, there are other changes that could be made and that students will ask about. One is that the proportion of revenue generated by Net60 through licensing, service, maintenance, and equipment is significantly different than Borealis. Some students will want to adjust revenues to those percentages, which is okay. However, we don't know if it is reasonable to expect this given that Borealis operates with a different customer base. Another is that Net60's costs for licensing and equipment (4.3% and 80.6%) are also different than Borealis's (8.6% and 68.8%). It would certainly be reasonable to change these, but they would have minimal impact as they result in relatively small changes in dollars and more or less offset each other.

### *Question 2: Pro Formas*

Once students have made assumptions about what "normal" operating performance would be, they can start to build out income statements for the next five years. In Exhibit TN-1, the main assumptions used in the pro formas are as follows:

- Revenue Growth = 10% per year. It can be debated whether this is optimistic or conservative, but given revenue growth over the past two years of 27% and 12%, along with Chris' and Dan's track record, it could be argued that this is a reasonable assumption (and, of course, anything higher would create a more attractive scenario). This growth rate was assumed for the License, Maintenance, and Equipment revenue streams.
- The Service revenue stream takes five years to get pricing to a 30% gross margin. At a growth rate of 10% per year, cost of service in year 5 would be \$4,432,000, and service revenue would be \$6,632,000 to achieve a 30% margin. For lack of a better assumption, the growth in Service revenue was split equally among the five years.

- Cost of sales for Licensing, Maintenance, and Equipment remained constant as a percent of each revenue stream (so each one increased by 10% per year).
- Operating Expenses were based on a percent of net sales. This was set to the percent from the adjusted 2007 income statement ( $\$6,134,000/\$14,405,000 = 42.6\%$ ).
- Depreciation/Amortization remained constant each year at \$360,000 (based on 2007 numbers).

While these assumptions are relatively simple, the instructor can stress to students that in reality, assumptions don't need to be overly complex – they just need to be justifiable. The instructor can also show the students how to perform sensitivity analysis by assuming different growth rates, different growth in pricing of services, and/or different operating expenses. This will show students the level of risk in missing target growth rates, etc.

### *Question 3: Accumulated Cash, IRR*

If we use EBITDA as a proxy for cash, the total accumulated cash from Exhibit TN-1 over the five-year period is \$24.3 million. If we assume an exit value of 12 x EBITDA, the exit value in year 5 would be 12 x \$6,233,000 = \$74.8 million, for a total of  $\$24.3 + \$74.8 = \$99.1$  million. At an investment of \$12 million, this comes out to a projected IRR of 53%.

The instructor can demonstrate different scenarios here as well. For instance, even at only a 3% revenue growth rate, the accumulated cash is \$74.6 million and the IRR is 44%; this illustrates how significant the opportunity is for implementing pricing changes in service and changes in operating expenses. Additionally, if Chris and Dan are able to make a second acquisition in this industry with similar financial potential, there is even more upside to acquiring Borealis.

### *Question 4: Should They Make the Acquisition?*

There isn't a right or wrong answer here either, but with the potential financial upside and Chris' and Dan's experience, it seems like a good bet. Also, with the limited information given in the case, Borealis is in an attractive market with products that add significant value to its customers, has high customer retention, is somewhat protected from competition, and has revenues spread out among customers (see Exhibit 8). If Chris and Dan can implement the changes in service pricing and the changes in operational expenses and simply maintain the customer base Borealis currently has, they can create significant value without growing the company at all. And, if they are able to make additional acquisitions that have the same type of upside, this could be an even larger opportunity.

## **Epilogue**

Chris and Dan decided to close the deal and took over Borealis in March of 2007. Between March 2007 and February 2009, Borealis acquired four additional companies (including Borealis, these companies generated \$41 million in revenue at the time of acquisition). They invested a significant amount of capital into technology upgrades and product consistency. They also spent a great deal of effort on employee morale post-acquisition, through surveying employees, implementing employee suggestions, and offering all employees stock options.

In early 2010, they introduced a product called Borealis Connect, which was created as a pager replacement. This product allowed pages to be sent to a mobile phone and would disable the phone until the user acknowledged that he/she received the page (eliminating the possibility for someone to claim they didn't receive a page when in fact they did). This product caught on quickly with hospitals and also caught the eye of strategic partners who needed a product to supersede actual pagers.

In March of 2011, Borealis was acquired for \$162.5 million. At the time, the five acquired companies that were now Borealis were generating \$60 million in revenue and approximately 22% EBITDA margins.

**EXHIBIT TN-1  
PRO FORMA WORKSHEET**

	2006	2007 (est.)	2007 (adj.)	2008	2009	2010	2011	2012
Sales:								
License	4,723	5,473	5,473	6,020	6,622	7,285	8,013	8,814
Services	1,953	1,881	<b>3,931</b>	2,771	3,661	4,552	5,442	6,332
Maint.	4,431	5,109	5,109	5,620	6,182	6,800	7,480	8,228
Equip.	808	792	792	871	958	1,054	1,160	1,276
Total	11,915	12,355	15,305	15,283	17,424	19,690	22,094	24,650
Discounts	888	900	900	1,038	1,183	1,337	1,500	1,674
Net Sales	11,027	12,355	14,405	14,245	16,241	18,353	20,594	22,976
COS:								
License	357	468	468	515	566	623	685	754
Services	2,284	2,752	2,752	3,027	3,330	3,663	4,029	4,432
Maint.	720	780	780	858	944	1,038	1,142	1,256
Equip.	593	545	545	600	659	725	798	878
Total	3,955	4,547	4,547	5,000	5,499	6,049	6,654	7,320
Gr. Profit	7,072	7,808	9,859	9,245	10,741	12,304	13,490	15,656
Gr. Profit %	64.1%	63.2%	68.4%	64.9%	66.1%	67.0%	67.7%	68.1%
Op. Expenses	6,413	6,911	<b>6,134</b>	6,066	6,916	7,815	8,769	9,784
Op. Profit	659	897	3,725	3,180	3,826	4,489	5,171	5,873
Op. Profit %	6.0%	7.3%	25.9%	22.3%	23.6%	24.5%	25.1%	25.6%
EBITDA	999	1,257	<b>4,085</b>	3,540	4,186	4,849	5,531	6,233
EBITDA %	9.1%	10.2%	<b>28.4%</b>	24.8%	25.8%	26.4%	26.9%	27.1%

**ENDNOTE**

1. New York University, Stern School of Business (2013). "Margins by Sector."  
[http://pages.stern.nyu.edu/~adamodar/New\\_Home\\_Page/datafile/margin.html](http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/margin.html).