

# Case Study: Carbon Audio

A Case Study in Strategy

**ETM527 PORTLAND STATE UNIVERSITY**

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## Company Background

Mark Schneider gave a guest lecture [1] to our class on May 15th, 2013. He provided an overview of his company, Carbon Audio, along with their existing product and future roadmap.

Carbon audio was founded in 2012 by Mark Schneider and Jason Martin. Mark serves as the CEO and has a technical background having worked at both Kodak and Logitech. Jason is the CCO and has worked at Nike doing industrial design work. The collaboration between Mark and Jason can be broken down as the combination of both good design knowledge, technical knowledge of how to make products, and market understanding. Carbon audio focuses on producing audio equipment for the mobile market, specifically focusing on Apple's mobile products (i.e. iPad, iPhone, Macbook). Carbon secured initial funding through crowd funding (i.e. Kickstarter) and angel investment. According to the RightStartups web article [2] entitled, "Zooka by Carbon Audio - The Dawn of the Compact Bluetooth Speaker", Carbon initially secured 1.82M in funding, which "came from a few different sources including Danny Guez from Los Angeles. Guez was so impressed with the founder's resumes, experience and the Zooka idea that he contributed 1.5M before even seeing the Zooka prototype." According to Mr. Schneider, Carbon's retail locations include: Apple, Target, Amazon, Walmart, Urban Outfitters, Best Buy, Nordstrom, MediaMart, Henri Bendel, Dixons, Argos, Virgin, London Drugs, QVC, Fred Meyer, and Fnac.

## Case Synopsis

To assess the Carbon Audio case study the following table was compiled to address the facts and situations that the company is currently facing.

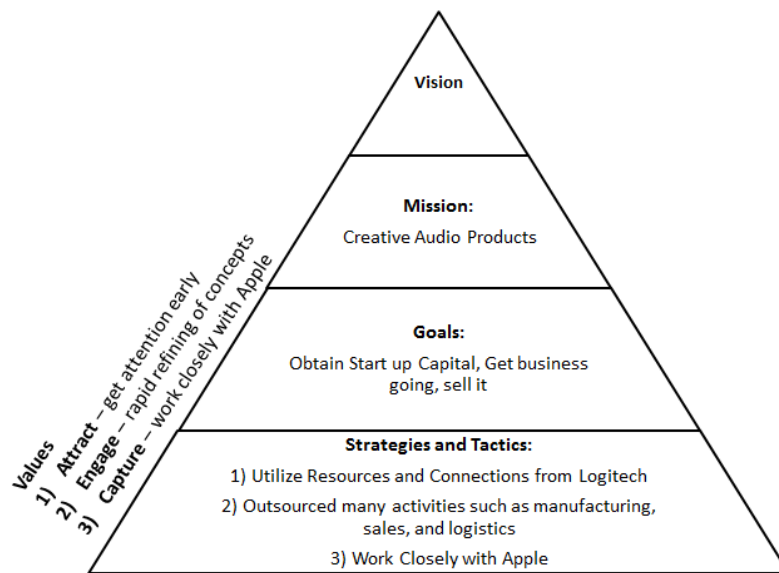
**Table 1: Carbon Audio Case Overview**

Scenario and Strategy Qualifiers	Description
What (and When)?	<ul style="list-style-type: none"><li>• A startup with one successful niche product, a "me too" future product roadmap, and a desire to sell the company</li></ul>
Who?	<ul style="list-style-type: none"><li>• Carbon Audio (Company and Employees)</li></ul>
Why?	<ul style="list-style-type: none"><li>• Start-ups follow four distinct business cycles [3]<ul style="list-style-type: none"><li>○ Larger and Successful</li><li>○ Stumble and recover</li><li>○ Develop a market niche</li><li>○ Failure of the business</li></ul></li></ul>
How?	<ul style="list-style-type: none"><li>• Leverage off initial success and sell the company (strategy speaker proposed)</li><li>• Consider updated strategy per suggestions outlined in this report</li></ul>

A MOGSA framework was used to summarize Carbon's strategy. As discussed in the class lecture [4] on **Strategy Process**, MOGSA stands for Mission, Objectives, Goals, Strategies, and Actions. The **Mission** sets the direction for the firm or team. **Objectives** and **Goals** define the shorter and longer range milestones in the direction. **Strategies and Tactics** include any change in direction required to reach the firm's goals and

what short term steps are required as action to support that change in direction. Carbon's long term **Vision** was not clear from the guest lecture or from research. Their **Mission** is to make creative audio products. Mr. Schneider clearly communicated that their **Goal** was one of a quick exit strategy; obtain startup capital, "get the business going", and the sell the business. Regarding **Strategies and Tactics**, Carbon seems to be focusing on a following three-prong approach: 1) utilize connections and resources from the executive team's previous companies, 2) Outsource many activities including manufacturing, sales, logistics, 3) Work closely with one primary OEM (Apple). Figure 2 shows a summary of Carbon's strategy, summarized using the MOGSA framework.

**Figure 1: Carbon Strategy Summary**



## Case Analysis

This case was analyzed using several concepts and tools from the course. The following concepts and how they compare to course learning will be discussed below:

- Product Development Process
- Operation Model
- Strategic Thinking
- Competitive Analysis
- Innovation Matrix

The Product Development Process [5] was selected for the analysis in an effort to understand how Carbon's NPD process compares to the process as discussed in the course. The team chose the Operational Model [6] for the analysis as it is useful in depicting all the support functions necessary for the manufacturing of a product. Since Carbon Audio is manufacturing and selling a physical product as opposed to being a service company, the team decided the Operations Model could provide a summary of Carbon's operations. A Strategic Thinking [7] model can help "create different views and even different kinds of logics in Top-Down and Bottom-Up Thinking". The team selected this model for the analysis to help get a better understanding of Carbon's strategy. A Competitive Analysis helped the team comprehend the market space and competitive landscape of Carbon's product line. Finally, an Innovation Matrix [4] assisted in the

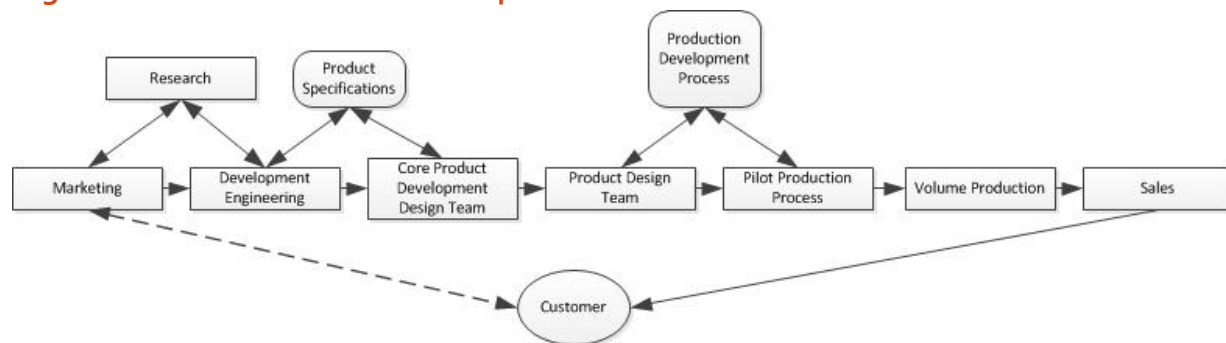
categorization of Carbon's products and helped understand how their products stacked up relative to the competition.

## Product Development Process

The team reviewed Carbon's product development process, shown in Figure 4, and compared it to the product development process, shown in Figure 3, proposed by Betz [5]. It is entirely possible that Carbon's development process is more detailed than the one presented by Mr. Schneider in class. For the analysis, the team assumed the development process was as stated during the guest lecture. The team noted the following areas of opportunity regarding Carbon's development process:

**Business Case Acceptance:** The NPD model proposed by Betz shows Marketing and Market Research as the first step in the development process. This step is where key market research information is studied and analyzed. Key information related to total available market (TAM) and serviceable available market (SAM) would be reviewed. Also, the return on investment, or ROI, would be calculated based on the perceived development cost of the project, estimated market penetration, etc. The projected gross margin (GM) would be reviewed to make certain the financial goals of the project fit into the goals of the firm. Carbon's strategy appears to rely on *strategic intuition* [8], which may work fine in Carbon's case as strategic intuition can be an effective strategy if "grounded on the context in which it is relevant and based on experience of that context." In other words, using strategic intuition can work if the firm possesses vast experience and knowledge in the given area of the strategy. Since Carbon's executive background is in the speaker market, strategic intuition may be an effective strategy. The team felt that the market analysis could only benefit Carbon's strategy and should be clearly identified as a step in their development process. Additionally, the business case and assumptions should be reviewed during subsequent steps of their process.

**Figure 2: Betz Product Development Process**



**Customer Collaboration, Form Factor, and NPD Cycle Time:** Mr. Schneider highlighted that Carbon's development process was typically nine (9) months from product concept to retail and distribution. Carbon's form factor, at least for their flagship product, is based on Apple's iPad and Macbook products. Apple's release cycle is typically between 8 to 12 months [9] for their product lines. This means that when Carbon kicks off a project which may be targeted for a given product line (e.g. iPad), that the form factor is understood at project kick-off. Having this level of form factor understanding requires deep customer focus and true collaboration from the target OEM. The team felt that Carbon's development cycle may be too long given the cadence of their target alignment. Mr. Schneider talked about Apple's willingness to be open with Carbon regarding the design of Carbon's products, so this may not be a big issue. Carbon's current development cycle relies on feedback from these target OEMs (i.e. Apple), which may be difficult to obtain in a timely manner.

In summary, the team found opportunities in areas of financial and market analysis during development, the overall development cycle time, and the reliance on customer feedback and transparency during the development process.

**Figure 3: Carbon Product Development Process**

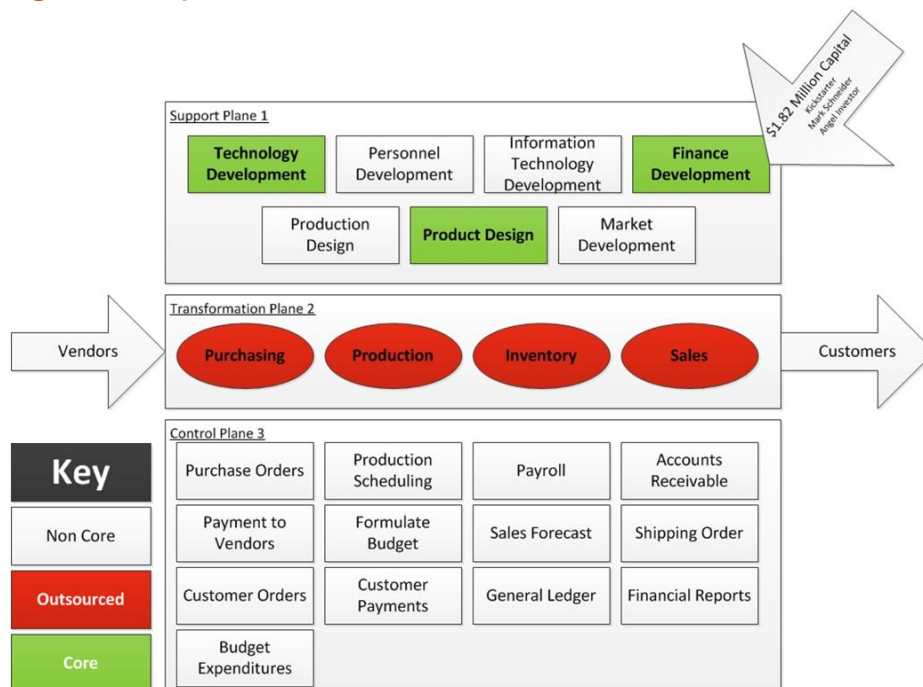


### Operation Model:

The operation model as proposed by Betz [6] breaks down an organization into three planes of activity. These layers are the **Support**, **Transformational**, and **Control** planes. Each of these planes has a different role in determining how information flows with respect to a product and a company. The following model, shown in Figure 4, identifies how Carbon Audio handles operations. The figure has been color coded to assist with visualization, the green color identifies a core competency and the red color indicates an outsourced activity. As indicated by the figure, Carbon Audio has a competency in finance development, product design, and technology development. These items were chosen based on the ability of the company to obtain start-up capital, the original designs of their products, and the adoption of new technology that has not been commercialized.

The transformational plane has been completely outsourced by Carbon Audio, as the sales and logistics have been set-up so that the organization could be sold and integrated easily into another organization without downsizing one of the companies.

**Figure 4: Operation Model**



### Strategic Thinking:

The Strategic Thinking matrix identifies a methodology for carbon audio to assess the market and business from both a top down market perspective and bottom up business perspective [10]. The table was color coded to identify when the actions were sufficient for the activity (green), not sufficient (red), or whether the activity was mentioned but not strategic to the organization (yellow). The following table shows the top down model for Carbon Audio.

**Table 2: Top down Model**

Top Down - Environment	
Description	Assessment
Scan environments of businesses	Yes, Using Professional Background
Interpret changes in environments as threats or opportunities to businesses futures	Not Clear Strategy Apple Focus
Analyze present business Operations in terms of strengths and weaknesses. For the future	Yes Strategically Outsource
Redefine business portfolio Strategy to create strong future industry positions	Yes Expanding Portfolio
Set targets for businesses and allocate resources	Somewhat Roadmap by Financial Targets not clear

The top down table identifies that Carbon Audio did assess the external environment when setting up their business, as they were sufficient with multiple items. The item that did not have a clear assessment was whether the company was entirely Apple focused, or if they also work with other manufactures directly. This was viewed as negative because recently, Samsung has been growing market share in this area and currently enjoys double the market share as compared to Apple [11]. According to Gartner [12], Apple will continue to dominate the tablet market until around 2015. The team felt the strategy seemed to be focused too heavily on Apple as Apple's market share is predicted to decrease and Carbon's strategy may be too narrowly focused.

The following table identifies the bottom up model for strategic thinking and takes on more of a business perspective internal to the operations of the business.

**Table 3: Bottom up Model**

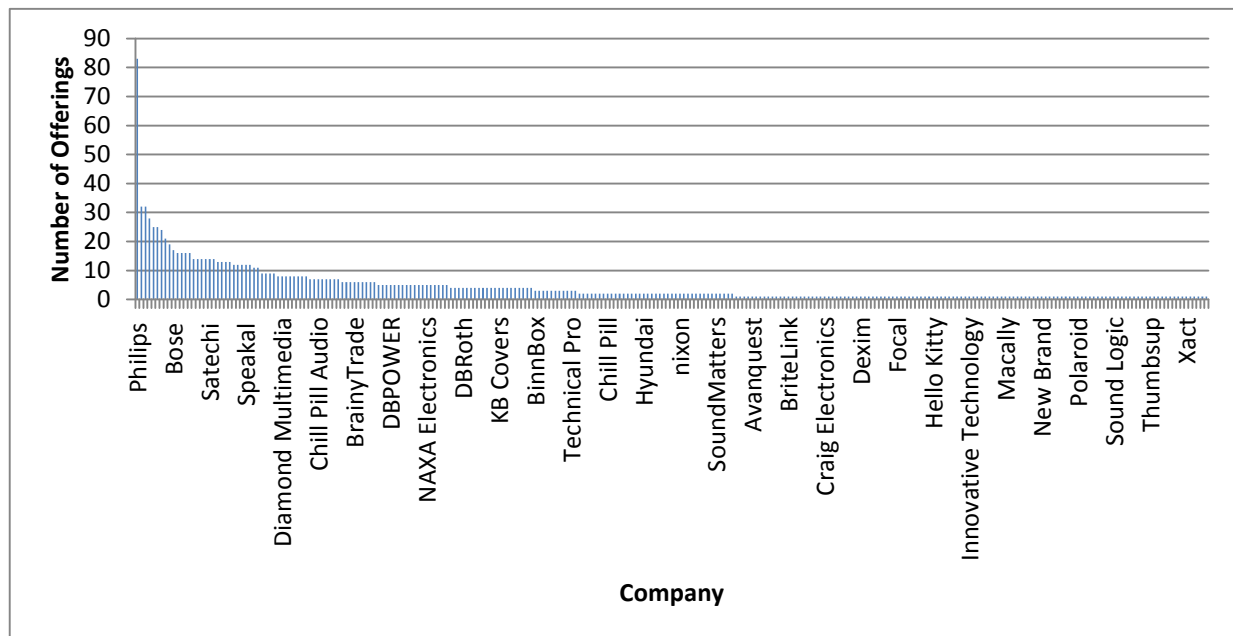
Bottom Up – Business Plan	
Description	Assessment
Trends in sales and Customer applications	Yes Growing Market
Benchmark products & Services against Competitors	Unclear if the target specs based on benchmarking Zooka has mixed audio reviews
Anticipate innovations In products/services & In production/distribution	Roadmap Seems Me Too New Products are not tied to apple introductions
Identify operations & support functions for Process reengineering	Yes Alliance w/ Experienced Partners
Formulate business plan With required investments And projected ROI	Not Clear

As indicated by the bottom-up table, Carbon Audio has mixed responses as to whether the company actually started with the operations in mind. This assessment comes from the fact that the company is more design focused and not really competing on an operations level. Additionally, the audio reviews for the Zooka product [13] have been mixed indicating that it performs somewhat average in the market. The roadmap appears to be primarily “me too” products as indicated in the table.

### Competitors:

Over one thousand competitive products were found for the Carbon line when searching Amazon.com [14] for “wireless mp3 speaker”. A summary of the competition is shown in Figure 6. Some companies produce multiple products as indicated by the magnitude of each bar in the chart. The list was truncated for the purposes of fitting the chart on the report page. The overriding message is that the market is very crowded and many products exist in direct competition for Carbon’s Zooka speaker and future product portfolio.

**Figure 5: Competitor Search Using Amazon.com**



To further analyze the effectiveness of Carbon Audio's sales reach three stores were audited to determine if the Zooka product was on the shelves and whether the employees knew about the product. The following Table documents the audit.

**Table 4: Store Audit**

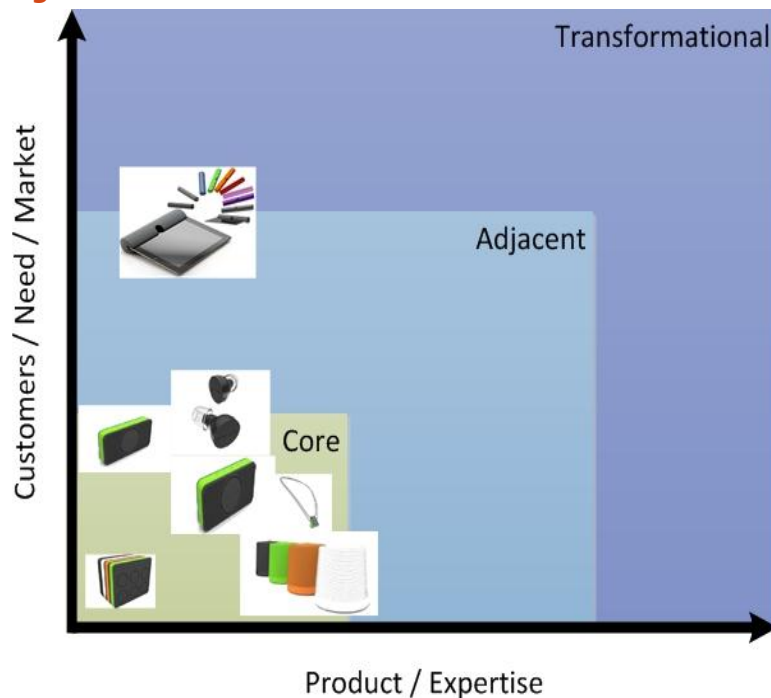
Store	Address	Date Audited	Zooka Present on Shelves	Did the employees know about Zooka.
Best Buy	1772 Jantzen Beach Center, Portland, OR 97217	May 28, 2013	No	No, recommended online ordering
Target	1555 North Tomahawk Island Drive, Portland, OR 97217	May 28, 2013	No	No
Apple	9530 SW Washington Square Rd, Tigard, OR 97223	June 1, 2013	Yes	First employee No, Second Employee Yes

### Innovation Matrix:

The innovation Matrix is used to identify where the products of a company fall with respect to the Needs of the Customer and Market, and the Product Expertise needed to execute the product. This matrix identifies different types of innovation characterizing them as *Regular*, *Niche*, *Revolutionary*, and *Architectural* innovations [4]. This graph can quickly create a visual as to how the products in a company's portfolio compare to the market. The following figure visualizes Carbon Audios products.



**Figure 6: Innovation Matrix**



For the innovation matrix the only product that was placed outside of the core area was the Zooka, this placement was due to the feature that lets the product assume a role as a handle and a speaker. The region where this product falls would be in the Niche Creation Innovation, since the product conserved existing production competency and altered the market competency. The other Carbon products were placed in the core region as they conserve the existing production and market competency [4].

### Recommendations:

Recommendations were compiled using the SWOT analysis [15] and Knowledge Map [16] tools covered in the course.

### SWOT Analysis:

A SWOT analysis was completed to document the elements of the carbon case and summarize them as either positive and negative elements and categorize them into either internal or external factors, depending on how they impact the perspective of the company [15]. The following table identifies the SWOT analysis as it related to the Carbon Audio case.

**Table 5: SWOT Summary**

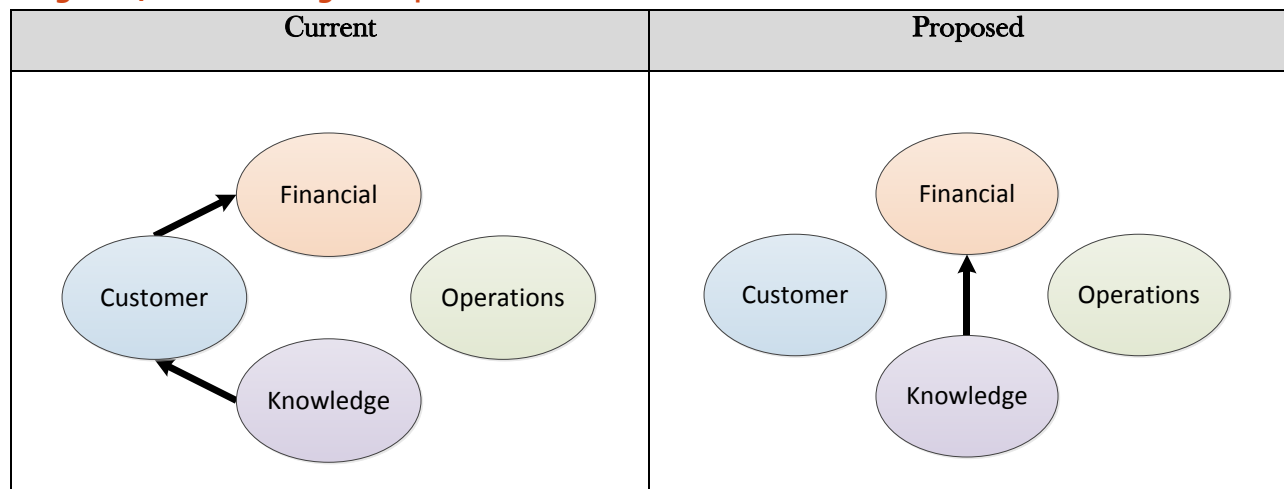
	Positive	Negative
Internal	<b>Strength</b> <ul style="list-style-type: none"> <li>• Form Factor</li> <li>• Management Team</li> <li>• Industry Knowledge</li> </ul>	<b>Weakness</b> <ul style="list-style-type: none"> <li>• Design Development Cycle is too slow</li> <li>• Resource limited (14 employees)</li> <li>• Non Diverse Portfolio</li> <li>• Products are tightly tied to Apple</li> <li>• Need to develop Core competency in their technology</li> </ul>
External	<b>Opportunity</b> <ul style="list-style-type: none"> <li>• No Samsung specific form factor (Samsung #1 mobile maker)</li> <li>• Create New Technology</li> </ul>	<b>Threats</b> <ul style="list-style-type: none"> <li>• If the form of an Apple product changes, company needs to react quickly</li> <li>• Apple could increase speaker Performance</li> <li>• Need to have acoustic specifications</li> <li>• Larger companies should have much better price structure / supplier leverage</li> <li>• Headphone directly competes with Apple</li> <li>• Product Reviews are poor</li> </ul>

As indicated by the above SWOT analysis the strengths of Carbon Audio come from the form factor of the product, the management team, and the industry knowledge. These strengths must be leveraged to overcome the weaknesses and threats to the organization. These items could be overcome by hiring more personnel with key skills and focusing some resources away from Apple while still utilizing the same strength of good production form and industry knowledge. A key strategic position would be the development of technological expertise in mobile technologies.

### Knowledge Map:

The Knowledge to Financial Model represents the different paths that knowledge can travel to create innovation for a company. Using this model the company can plan strategies for how the knowledge will be used to create financial wealth for the company [16]. The following knowledge maps identify how Carbon Audio creates wealth which is the conversion of knowledge to customer demand and ultimately, financial wealth. For the current structure of Carbon Audio it is recommended to transfer knowledge into financial wealth directly by selling or patenting designs. This change would alter the company from an audio specific company to an Industrial Design (ID) company that focuses on commercialization. This path was chosen due to the core competencies of the organization and the fact that the direction is the shortest and most direct path for accomplishing the financial goals of the business.

**Figure 7: Knowledge Map**



### Conclusion:

Carbon's early success with their Zooka audio product has put the company in a unique position where they either need to sell the business or execute on their future strategy. From a pure academic standpoint, Carbon Audio appears to be in an uphill battle given the competitive landscape and cost pressures in this market. However, as with most strategy based arguments there is no simple right answer. Mr. Schneider clearly communicated that Carbon's primary strategy was to sell the business and product portfolio. They seem to be on the right track if this is the primary goal. If however, Carbon finds itself without a buyer and in position to continue in this market space, Carbon may consider the team's suggestions based on our analysis using lessons from ETM527. These suggestions are summarized below:

- Add expertise internally to speed up the development process
- Diversify portfolio and platform (e.g. Samsung for factors, Google Nexus)
- Add experts to develop proprietary technology (i.e. speaker design)
- Change business model, focus on selling/licensing knowledge assets (i.e. industrial design)

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