**Introduction to Systems Thinking - D372**

Task 1

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**Iceberg Tool – Scenario 1**

* Explain what happened in this case study.
  + Consumer pressure has led to Wilde’s Bramble ramping up production using all their savings and increased debt.
* Explain how people reacted/responded to what happened.
  + Sky rocketing demand has forced Wilde’s Bramble to get more loans for more resources to produce more product to me the demand. Calla Wilde got another job to supplement income.
* Comparing the beginning of the case and the end, explain what changed and what continues the same.
  + At first all was well with just selling at the farmer’s markets and investing their savings wisely. However, pressure mounted forcing a need of cash to expand operations to meet demand. More credit card debt and loans helped with cashflow, but also cut into profits. Debt continues to rise, and profits continue to sink even as sales rise. One of the founding members is now working another job to help with cash flow.
* Given the case study, what would you anticipate will happen next? How could the involved parties plan or prepare for that?
  + It is likely that the couple will need to declare bankruptcy or scale back operations and liquidate some of their assets. All parties will need to get together, so they understand how they will be affected. There could be some way to raise prices or get investment from the grocers or others who still really like the product and want it to continue. Investment could be the answer too. Wilde’s Bramble could put the business on the market.
* Explain the patterns you see in this case study, why they exist, and how they affect the system.
  + In this case study, Wilde’s Bramble does not stand up to consumer pressure as it should. It grew too fast and took out too much debt to maintain. More customers require more produce, Bramble needs more money to grow more produce, Bramble needs more sales to cover debt, and the cycle starts again with pressure to produce more product for customer demand.
* Explain how you could design or create a solution to transform this system and address the problem.
  + Wilde’s Bramble needs to scale back operations and pay down debt. They should be looking to grow slower in the future, saving more of their profit for reinvestment instead of relying on high interest loans. This is how they made it work before.
  + Another solution would be to look for investors to share in the risk and better their cashflow. Perhaps one of their larger retailers.

**Behavior Over Time Graph**

Graph of sales, profit, and debt; debt and sales lines rise, left to right, and profit line rises and then falls.

*Figure 1 - Sales line begins at y-axis slightly above x-axis and rises smoothly in a concave curve to a high point at far right near the top of the graph. The profit line begins slightly below the sales line at y-axis and crosses the sales line to a high point at the lower third of the height of the graph, midway along the x-axis, then falls at far right to near x-axis. The debt line begins at the y-axis very near the x-axis and rises sharply to a high point at far right to near top of the graph.*

This graph best represents what is happening with Wilde’s Bramble. You can see debt, sales, and profits were all relatively low and flat. As time went on, they were able to take on more debt, increase sales in bigger markets, and make a lot more profit. You can see a sweet spot before the profit and sales dips below the debt line. At the end, you see debt out pacing sales, and profit hitting an all-time low, even lower than when they started out at the farmer’s market.

**Analysis**

Using the iceberg tool and behavior over time graph, gave both reveal dysfunctional patterns of business for Wilde’s Bramble. The iceberg tool revealed a lot of information about what went wrong and the structure that is causing the issues. In this case, the cause is a structure of a cycle of customer demand, produce, borrow, customer demand, produce, borrow, ad nauseum.

Looking at the behavior over time graph reveals the patterns clearing affecting sales and profits. It also documents a time when profits outperformed both sales and profits. It is worth noting this, as scaling back to this, if possible, would be ideal.

Going back to the iceberg tool, we find that there was a smart investment by Wilde’s Bramble using their savings. With no high interest debt to pay down, profits soared. This is likely the middle portion of the behavior over time graph where you see profits above sales and debt before debt rises above sales.

Looking further down the timeline, we can see the business appears to be doomed as debt outpaces revenue by a large margin. Soon, if not already, Wilde’s Bramble will be insolvent.

### References

Karash, R. (2016, August 19). *How to see “Structure.”* The Systems Thinker <https://thesystemsthinker.com/how-to-see-structure/>

Kim, D. (2018, March 23). *Behavior over time diagrams: Seeing dynamic interrelationships*. The Systems Thinker. <https://thesystemsthinker.com/behavior-over-time-diagrams-seeing-dynamic-interrelationships/>

WGU. (2020). Introduction to Systems Thinking. <https://apps.cgp-oex.wgu.edu/wgulearning/course/course-v1:WGUx+OEX0102+v01/block-v1:WGUx+OEX0102+v01+type@sequential+block@1f3cc1fe0efb4e5cbb169acf0c0951b4/block-v1:WGUx+OEX0102+v01+type@vertical+block@79edae5127984499b969c05f1934a237>