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BrainGu Manifesto

Changing the Box

The BrainGu Vision

"To dream of, incubate, and scale technology businesses built around capabilities that advance the state of the art."

Document Revision History

Version	Date	Author(s)	Changes
1.0 RC1	01/04/2018	John Spencer	Initial document draft coalesced
1.0 RC2	01/05/2018	John Spencer Michael Kahn	De-emphasize cyber and focus on core tenets
1.0 RC3	01/07/2018	John Spencer	Remove passive language
1.0	04/04/2018	John Spencer	Final edits and release

I. INTRODUCTION & PURPOSE

The problems facing technology in every industry today are growing in scale at an exponential rate. Whether we look at the frequency and impact of cyber attacks, processing inordinate amounts of data that has become available in recent years, or creating new capabilities while maintaining an ever-expanding legacy footprint -- it is clear that we have to become much more efficient if we hope to keep up. Even more so if we wish to take advantage of the opportunities this growth brings.

BrainGu is an innovation lab with an overarching mission to "dream of, incubate, and scale technology businesses built around capabilities that advance the state of the art." As a company, we combine critical analysis, creativity, and technology to transform and scale existing workflows by an order of magnitude. Our team is made up of passionate and creative problem solvers. We bring a range of experience and perspectives to bear on difficult challenges. By applying a multidisciplinary approach to innovation, we overcome inherent biases that might otherwise overlook potential solutions.

To accomplish such a transformation, we develop and deploy capabilities that improve the outcomes of technology practitioners. Through automating the most time consuming and error-prone aspects of their workflows, our customers realize the kinds of change that finish tasks in days instead of weeks, at a volume of thousands instead of hundreds.

TL;DR

Automate shit + (smaller teams / smarter people) = MAGIC.

"Adapt what is useful, reject what is useless, and add what is specifically your own." - Bruce Lee

"The power to question is the basis of all human progress." - Indira Gandhi

"The only way of discovering the limits of the possible is to venture a little way past them into the impossible." - Arthur C. Clarke

"There is nothing impossible to him who will try." - Alexander the Great

"You wanna fly, you got to give up the shit that weighs you down." - Toni Morrison

"Impossible"

Problems that when viewed inside traditional constraints cannot be solved

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but, when those constraints are creatively challenged, a non-obvious solution results.

II. WHY: To Do It Better

Status Quo++

We believe that the status quo for technology solutions isn't effective and won't scale sufficiently to match growth in the problem space. Generally speaking, technology work is done by groups of individual "artisans" with each person working their tools against a single scoped goal. The focus tends to be on achieving impacts through adding more labor over innovation – seeking qualified individuals and growing ever larger groups.

It's our experience that larger groups become less efficient due to limited insight between sub-groups working on similar objectives. To re-focus scaling efforts on innovation over labor, we move from groups of individuals to highly functioning teams. The outputs of a well tuned team outweigh the sum of individual contributions.

Teams need better tooling and process to get repeatability and scale to their solutions. At BrainGu, it's our job to create the capabilities that help them succeed. Through this approach, we help "Do it Better" regardless of the specific problem domain. We work with our customers to imagine better possibilities and assist them in building the tools and processes to get them there. When it's not obvious which path is "better", we use the ***Brent Triangle*** to evaluate the *impact* of a potential action against three criteria: mission success, financial implication, and personnel engagement.

For more on this, look for **"Brent Triangle"** in the wiki.

III. HOW: One Step at a Time

Our Delivery: Continuous Improvement

Turning **"impossible"** into achievable is a part of daily life at BrainGu. Our biggest weapon against complexity, time, and resource constraints is the Minimum Viable Product (MVP). An MVP is the smallest deliverable, with the least effort, which can provide immediate value against a problem -- scratching the itch. Once we accomplish something, we deliver it to real-world users who gain its benefit and show us what is needed next.

For more on this, look for **"Change the Box"** in the wiki.

Our Analysis: Higher Order Thinking

Critical analysis is necessary to identify a problem's contextual strengths and weaknesses before devising a solution. To be effective, we want to keep as much as possible and build forward—not throw it all out and start over at zero. Factors such as organizational politics, available resources, and deadlines can drastically alter the path to success for a project. Accounting for non-engineering contexts is as important as technological delivery.

For more on this, look for **"Don't Fight Gravity"** in the wiki.

Our People: Confident and Capable

We commonly work in environments with sparse requirements, fast-moving deadlines, and difficult personalities—so we are well practiced in handling adverse situations. This "Grace Under Fire" demeanor gives our customers confidence in our abilities and puts them at ease when the pressure is on. Being capable doesn't mean we know everything or never make mistakes. It means we always bring our A-game and work hard to meet our goals. We always communicate honestly, keeping stakeholders in the loop even when the news is rough.

See the section "*Outside the Shell*" in the wiki under **"The Shell"** for more.

Our Team: Engaged and Enabled

No one can do it entirely alone, nor should they have to. We rely on our teammates to have our back in the trenches and to share their knowledge so we all benefit. Our success is measured at the team level, so members are engaged with the work and each other. This creates an environment where we can share ideas more freely, leading to more innovation.

See the section "*Inside the Shell*" in the wiki under **"The Shell"** for more.

IV. WHAT: Make an Impact

Overview

Our success as an innovation lab is defined by the success we help our customers achieve. Where our technologies can provide the greatest impact is in relieving the root causes of their pain points. It's our job to break down the organizational and systemic roadblocks to deliver capabilities that sustainably transform the way our customers work. A key to this sustainability, and a proof point in our success, is the level of adoption a solution gains. Our goal is for our solutions to become integral to our customers, leaving them better equipped to handle their missions.

Innovation projects vary in subject, industry, and intensity, but share common elements:

- Human enablers
  - Augment and amplify the capabilities of the individual
  - Lower the barriers to collaboration between practitioners
  - Present data in a more consumable and accessible manner
- Organizational success
  - Critical component to reaching a strategic ambition
  - Cross-cut multiple silos to service a core mission need
  - Fulfill responsibilities for compliance and governance
- Engineering challenges
  - Deliver outcomes that cannot be handled by existing products
  - Unite disparate technologies into a complex, but functional system
  - Apply best practices where possible, create them where none exist

Automate to Innovate

Automation focuses on improving and scaling difficult, labor-intensive tasks. While most view automation as an all or nothing proposition, we look for automation opportunities that provide immediate impact even if that work does not completely solve the manual problem. An apt analogy is cruise control; the technology is useful for drivers, but it does not remove human input from the process, rather, it amplifies the human's capability and lessens the load. This is sometimes referred to as "autonomation".

Solving the same problem many times over is a result of automation. To go beyond scaling to true innovation, we must solve an entire class of problem. If the problem set were getting seeds out of a fruit, the creation of a seedless fruit solves the "class" of problem -- not just one time or several times, but every time. For us to innovate, we use our ability to streamline process as a primary advantage in the creation of a new class of tools.

Create a Center of Gravity

Most projects suffer from lack of clear requirements and consistent scope. For the average project, these are frustrating conditions -- but for a complex project it can stifle chances for success. When the engineering challenge is paired with organizational uncertainty, a common result is frequent “fires”. A “fire” in this context is a perceived emergency situation which is caused by extreme reaction to an unexpected event. While there are some justifiable causes, these are often attributed to a lack of communication, resources, and/or leadership. During a “fire” rational decision making suffers as tensions increase and panicked thinking rules supreme.

Our typical entry point into a project is often one of barely contained chaos, with “fires” occurring weekly or worse. To deal with this, we apply a “Change the Box” attitude to focus on creating an environment where reason and innovation can take root.

This is our abstract project roadmap:

- Phase 1: Chaos
  - Assess project procedures, previous deliveries, and overall requirements
  - Use MVPs to deliver capability despite constant “fires”
- Phase 2: Stability
  - Leverage collaboration tools to improve project insight and visibility
  - Inject process to balance workflow and reduce “fires”
- Phase 3: Delivery
  - Continuously deliver a steady flow of small, functional improvements
  - Handle “fires” on an ad hoc basis (they will likely never reach zero)

Knowledge is Power

All problems are connected. Whenever feasible, we leverage our knowledge between problem sets to achieve greater impacts. Through documenting processes and technical details, participating in brainstorming sessions, and presenting at conferences, we share our knowledge as widely as possible. Taken to extreme form, we can release tools or build a product based around recurring challenges. Ultimately, we want to use our experience from solving problems for our more specialized customers to result in producing innovations that can impact a broad customer base.