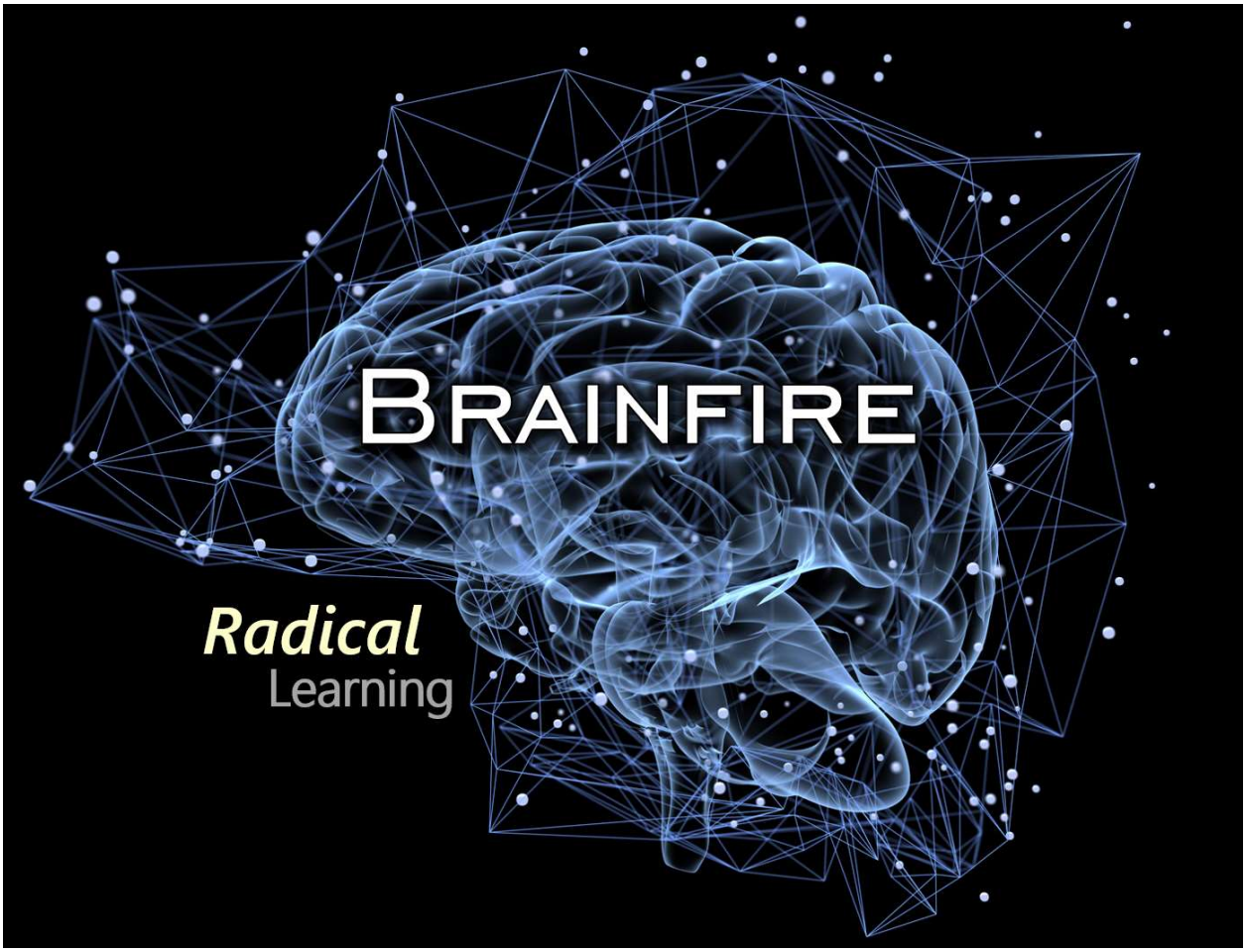


BRAINFIRE LLC

BUSINESS PLAN

2021-2030

Confidential

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Executive Summary

A World-Changing Breakthrough in Education

Brainfire Radical Learning Packs enable students to:
1) Learn new ideas 4 times faster!
2) Remember 100% of what they learn.
3) Track every Idea they *currently* know.

Problem: Students learn only 60% of what they are taught and quickly forget 42% of what they learn. Both online and classroom learning follow the same "teach, test, and forget" approach used for thousands of years. Knowledge is not maintained. University degrees and course completion certificates do not show what a person *currently* knows.

Solution: Brainfire will leverage Learning Science to introduce **a radical new learning paradigm**: teaching *by* testing and maintaining knowledge through Optimally Spaced Active Recalls (OSARs). Brainfire will empower students with **superhuman abilities to learn 4X faster, remember 100%, and track every Idea they *currently* know**. Brainfire will introduce the world's first Knowledgebase Authoring Tools that package educational content into Radical Learning Packs (RLPs) delivered via Brainfire's Radical Learning Engine. **A key strategic advantage is that Brainfire RLPs can enhance *existing* online video courses, *existing* textbooks, and *existing* classroom instruction.**

Market Scope & Segmentation: Global education is a $6 trillion industry that will grow to $10 trillion by 2030. In the USA there are 20 million university students, 57 million K-12 students, 3 million homeschool students, 65 million corporate & government employees receiving annual training, and millions of Independent Learners. The EduTech sector will reach $342 billion by 2025.

RLP Production: Brainfire LLC will produce Radical Learning Packs 3 ways:

1) Joint Ventures with existing video course providers and textbook publishers.
2) Partnerships with ***FasTTrak*** Consortiums to develop industry-specific education.
3) Brainfire's eLearning Platform enabling educators to create and publish courses.

RLP Sales: Brainfire LLC will sell Radical Learning Packs 4 ways:

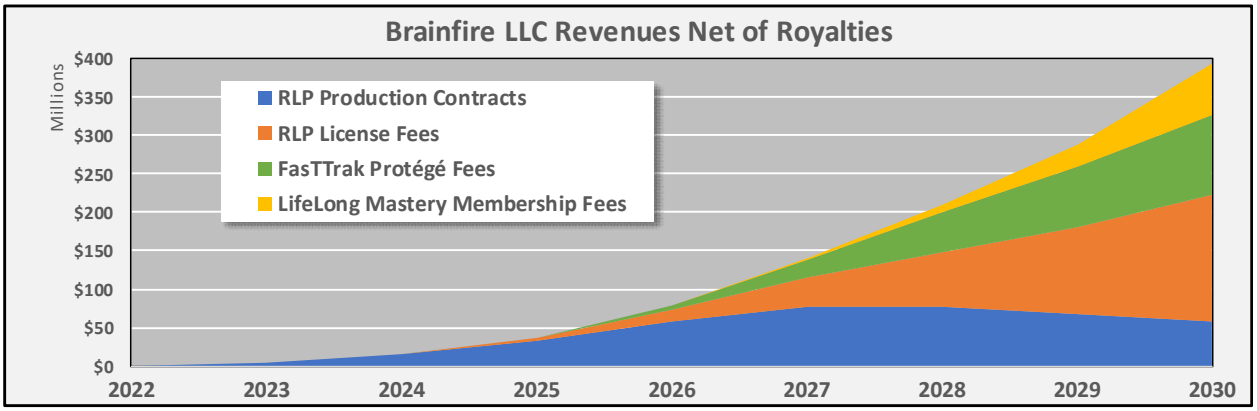
1) Direct sales to High Schools, Universities, Corporations, the Government, and Military.
2) Online eLearning Platform similar to Udemy, founded in 2010 and now worth over $3 billion.
3) Brainfire's ***FasTTrak*** program enabling students to get paid to learn while they work.
4) ***LifeLong Mastery*** program enabling university graduates to maintain and expand their education.

Investor Returns: Brainfire LLC is offering a 33% partnership basis for a $500,000 investment. This investment will fund the completion of initial versions of Brainfire software by the end of 2022. The partnership anticipates distributing earnings to partners beginning in 2024. The **10-year Net Present Value of investor distributions is projected to be $39 million**. If Brainfire LLC is acquired at the end of 2030 for $1 billion the **NPV of this investment will be $154 million with an IRR of 110%!**

Brainfire's Radical New Learning Paradigm

Learn 4 times faster! Remember 100%! Track every Idea currently known!

Characteristic	Typical Educational Practice	New Brainfire Paradigm
Content Packaging	Courses: Subjects taught in courses.	Ideas: Knowledge broken down to individual Ideas packaged in Radical Learning Packs (RLPs). Students learn Ideas interleaved *across* topics in prerequisite driven order!
Teaching	Didactic Presentations: Classroom lectures, videos, reading assignments.	Teaching by Testing with guided deep encoding and Optimally Spaced Active Recalls (OSARs).
Reinforcement	Homework	Applications: Students apply knowledge to solve problems, operate widgets, and perform in simulations and adventures.
Assessment	Small Sample Testing: Only a small portion of the material is tested.	Brainfire maintains and tracks real-time mastery of *every* Idea!
Test Interactions	Basic: multiple choice, fill in the blanks, essay	Elaborate domain specific Interactions.
Tailoring	Little to None Most classroom & online education is one size fits all.	Total: Students waste no time on material they know and focus *only* on what they need to learn.
Memory Stages	STM, ITM	STM, ITM, LTM, PSM
LTM Development	None	LTM Radically Accelerated (4X or more!)
LTM Maintenance	None	100% recall is maintained!
Certification of Learning	Historical: Attendance, Grades, Degrees. These are crude indicators of past performance providing no indication of current knowledge.	Brainfire can certify: *Every Idea* the student *currently* knows! *Every skill* the student can *currently* perform!



	Without Acquisition			With $1 Billion Acquisition		
Investor Returns	**Distributions**	**NPV**	**IRR**	**Distributions**	**NPV**	**IRR**
Mark Patterson	$ 191,854,648	$76,058,183	95%	$ 841,854,648	$303,879,217	110%
Bruce Chou	$ 5,903,220	$2,361,436	142%	$ 25,903,220	$9,371,314	153%
Angel Investor	$ 97,403,129	$38,614,154	95%	$ 427,403,129	$154,277,141	110%
VC Investor	na	na	na	na	na	na

Key Points

- AI, robotics, and geopolitical shifts are creating a massive demand for lifelong learning.
- Brainfire will help meet this demand by introducing a **radical new learning paradigm**.
- Today, students learn only 60% of what they are taught and forget 42% of what they learn.
- Learning is not maintained. University degrees don't show what students currently know.
- With Brainfire students learn **4x faster**, remember **100%**, and track every Idea ***currently* known**.
- Knowledgebase Authoring tools will package learning content into **Radical Learning Packs** (RLPs).
- Information will be stored in Knowledgebase **Entities** that *generate* **Ideas** and **Interactions**.
- Students will purchase RLPs and download Brainfire's **Radical Learning Engine** for free.
- Brainfire's Radical Learning Engine will enable students to master the Ideas in RLPs by:
    - **Deep encoding** short-term memories (STM) for new Ideas.
    - Boosting STM to Intermediate-term Memory (ITM) by re-encoding **3X within 30 minutes**.
    - Accelerating the shift to Long-term Memory (LTM) using **Optimally Spaced Active Recalls**.
- Joint Ventures will fund development of **RLPs that enhance existing online courses** and books.
- Brainfire's Platform will adopt the **Udemy business model**: founded in 2010, now worth $3 billion.
- Educators will use Brainfire's online Knowledgebase Authoring tools to create and publish RLPs.
- Brainfire's Platform will be **compatible with existing LMSs** and use the advanced **cmi5 standard**.
- RLPs will be sold to Homeschoolers, High Schools, Universities, Corporations, and the Government.
- Brainfire's ***FasTTrak*** learn-while-you-work program will provide a direct path to a career.
- Industry-specific RLPs will be funded by ***FasTTrak*** Consortiums.
- ***Lifelong Mastery*** will enable university graduates to maintain and extend their education.
- Brainfire's ***Total Recall*** will certify every Idea ***currently*** known and every skill ***currently*** mastered.
- A prior convertible bridge loan of $7k funded the research & development of this business plan.
- 33% of Brainfire LLC is offered for $500k to fund completion of Brainfire software by December 2022.
- RLP production contracts and RLP sales may eliminate the need for additional investment.
- R&D expenditures during 2021 and 2022 will provide pass-through income tax shields.
- Brainfire LLC expects to distribute profits to investors as early as 2024.
- Partner distributions will not be subject to SE tax and will qualify for a 199A 20% tax deduction.
- By 2030 investor distributions may total $97 million, providing a **NPV of $39 million and IRR of 95%**.
- In addition, the investor may profit from an acquisition or future public offering.

Who is Mark Patterson?



In 1975, as an undergraduate student at Brigham Young University (Provo, UT), Mark Patterson purchased his first computer. The first application Mark coded was an interactive flashcard program to help him remember key ideas from his classes. While still a student, Mark was hired as a software engineer for WICAT, one of the early pioneers in computer-based education. Mark enrolled in BYU's University Studies program enabling him to combine dual majors in Neurobiology and Computer Science with additional focus on Physics, Statistics, and Chemistry. Mark was often at the top of his classes. For example, Mark ranked #1 out of 400 physics students. After seeing a demonstration of interactive videodisc technology at BYU, Mark decided to pursue an MBA and then to start a computer-based education company. Mark graduated from BYU as a Karl Maeser Scholar.

Mark received his MBA from the Tepper School of Business at Carnegie Mellon University in Pittsburgh, PA where he was honored to receive the *Entrepreneur of the Year* award. While still an MBA student, Mark launched MindBank, an early innovator in computer-based education. Mark raised $1.5 million to launch Mindbank. Investors included Carnegie Mellon University and leaders from Pittsburgh's High-Tech community. MindBank's clients included some of Pittsburgh's largest corporations including US Steel, PPG, and CNG. MindBank entered into a Joint Venture with Price Waterhouse to open an interactive videodisc business learning center at the US Steel Building in downtown Pittsburgh. MindBank developed a sophisticated computer and video simulation that trained CNG pipeline operators to respond to bad weather, pipeline ruptures, and other gas pipeline emergencies.

Mark's father, Frank Patterson, founded Motivational Concepts, Inc. presenting communication and management seminars under Chamber of Commerce sponsorships across the USA. MindBank partnered with MCI to develop ***The Name Game*** an interactive videodisc party simulation enabling students to practice meeting and remembering the names of party guests. Mark worked with his father to setup computer-based videodisc training centers in major USA cities where over 60,000 executives benefited from ***Name Game*** training.

Mark conducted an extensive literature review of the neurobiology of memory that enabled him to identify the neurobiological basis for the 5 stages of memory and to propose optimum strategies for promoting memories from one stage to the next. Mark has developed prototypes of Brainfire software and is the author of this business plan.

Mark is a life extension, health, and fitness enthusiast. He enjoys weight training and hiking. Mark currently resides in Crozet, Virginia.