Next $1B Unicorn Start-Up:

A Fitbit for your Brain

(MGH-N: Low-Cost MRI for the Public)
The New Low Cost & High Capability MRI Technology: Fitbit for Brain Health

Technology & Value Proposition:
1. Developed by Harvard, MGH, U of MN & others.
2. Supported by $13M+ NIH grant.
3. 1.5T MRI which does not require extensive shielding & field uniformity.
4. Core of technology: High quality imaging under imperfect & non-uniform fields.
5. Low Cost: NO CapEx. NO shielding. Lease the equipment.
6. 400kg, semi-portable device.
7. 15-30 min exam.

Jobs to be done:
1. NO sacrifice in image resolution.
2. NO CapEx needed. NO Upfront payment.
4. Potential for mobile MRI exam stations on trucks.

Timeline & Next Steps:
1. Extensive IP coverage secured.
2. Operational Prototype Ready: mid-2021
3. FDA 501(k) approval submission: 2021
4. Scale-Up & Commercial Launch: 2022+

Competitive Offerings & Market:
1. $8B market (2019)
2. 1.5T-3T.
3. High-end equipment by GE, Siemens, Phillips.
4. CapEx ~ $5M. OpEx ~ $5M/yr.
5. High margin for vendor and operator.

1. 0.06T, Fully portable equipment by Hyperfine. CapEx ~ $100k.
2. 0.5T, smaller MRI by Synaptive. Mid-tier MRI.

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#1: Target US or OUS Hospitals (B2B):
2. High margin, core business for the Majors
3. High margin for each player in Value Chain
4. Entrenched competition & high barriers to entry: Service & software contracts & cost of integration.
5. GE portfolio: $700k to $5M. Mid-tier equipment ($2-3M) more common for commercial customers.

#2: Target US Military (B2B):
1. NO current interest from US Military.
2. NO current plans to use MRI as a screening tool.
3. NO interest to install MRI equipment due to cost & need for operators. Evacuating personnel to civilian hospitals in US, Germany, Japan feasible.

#3: Leasing w/o CapEx for small US hospitals (B2B)

Our Recommendation: Implementation Possible, if True Drop-In with AI

Why are we in this business?
Create a new, accessible category to bring MRI to masses.
Current MRI: Upfront CapEx = up to $10M ($EM for building + $5M for device).
New MRI: NO Upfront CapEx. NO Building. Lease the device as you go.

Competitive Advantage:
This is the ONLY MRI technology that can provide a high-quality image without the need for shielding at the fraction of the cost of existing equipment (protected by multiple patents).

Customer Acquisition:
Customer will lease the equipment. NO need for expensive CapEx. NO need for expensive building prep. Nearly turn-key equipment.

Overall Economics:
$50M in upfront R&D and scale-up. Need ~70 paying customers (70 equipment sold) to break even at 70% Net margin.

Design & Build:
The core of the technology is a software, along with limited hardware, that enables imaging under imperfect conditions. Thus, easy to build.
Risks: FDA approval, engineering.

Scaling:
1. Start from the lowest Tier of the existing US market.
2. Create a new category, expand & capture new market.
3. Replicate the same in outside of US.

#4: Target Gen. Pop. (B2C)

Market Research Needed to Identify:
1. Addressable Consumer Pain Point
2. Willingness to Pay
3. Value Creation
4. Competitive Advantage

Our Recommendation: Ethnographic, Qualitative, & Quantitative Market Research Needed
**Recommended Path Forward for Option #4 (B2C)**

1. **Ethnography & deep learning**  
   Method: Home visits.  
   Typical # of consumers tested: <10  
   Typical Objective: Identify jobs to be done.

2. **Qualitative Testing:**  
   Method: Online and/or in-person probing. Conjoint study most likely needed.  
   Typical # of consumers tested: ~500+ if online, <100 if in-person  
   Typical Objective: Segmentation, believability, importance of job-to-be-done etc.

3. **Quantitative (actual use) Testing:**  
   Method: The use of actual prototypes by consumers in a representative setting (Walmart or CVS?)  
   Typical # of consumers tested: min. 300  
   Typical Objective: Answering big questions of willingness to pay, net promoter score (top 2 boxes).

Estimated timeline & budget: 8-16 weeks. $250-500k
Overall Project Recommendations: Fitbit for Brain Health

1. Developing & Integrating AI software appears to be critical.

2. Both for B2B (small US hospitals) and B2C (gen. pop.): An integrated, truly drop-in (minimum building modification without CapEx), turn-key, and near autonomous equipment (hardware + AI software) which would require minimum intervention by specialist physicians during regular operation appears to attract interest.

3. For B2C (gen. pop.): Market research is needed

Actionable health insights provided to the user