

# Brain Imaging Venture

Healthcare-Lab 2020  
Host: Massachusetts General Hospital  
Cambridge, MA USA

## A New Era for Brain Health



### Project



A multidisciplinary academic team including MGH is currently developing a new form of brain imaging using MRI technology.

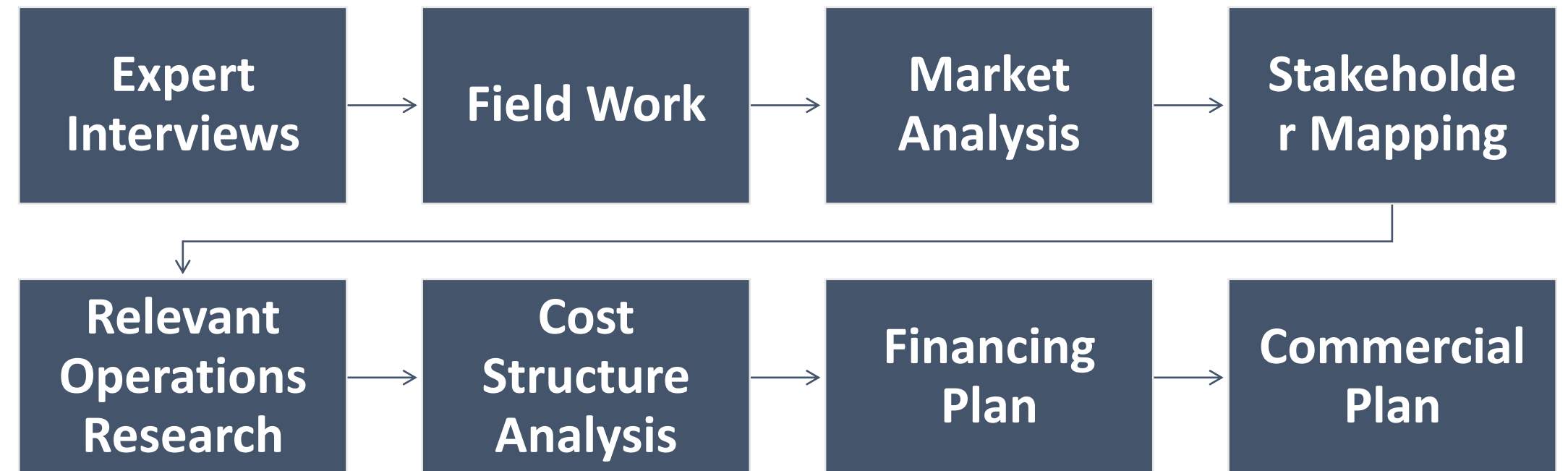
Key differentiators vs. market:

- Low cost
- “Portable” technology
- Minimal safety requirements

#### H-Lab Contribution:

Evaluate current market structure, key stakeholders, and associated costs to make commercialization recommendations that include next steps for the venture.

### Methodology and Motivation



#### Unmet Need:

Brain Scans are expensive and are taken very late in a patient’s care journey, deterring early detection of brain disorders

### MRI Landscape



**MRI Market projection is \$33.5B by 2024**

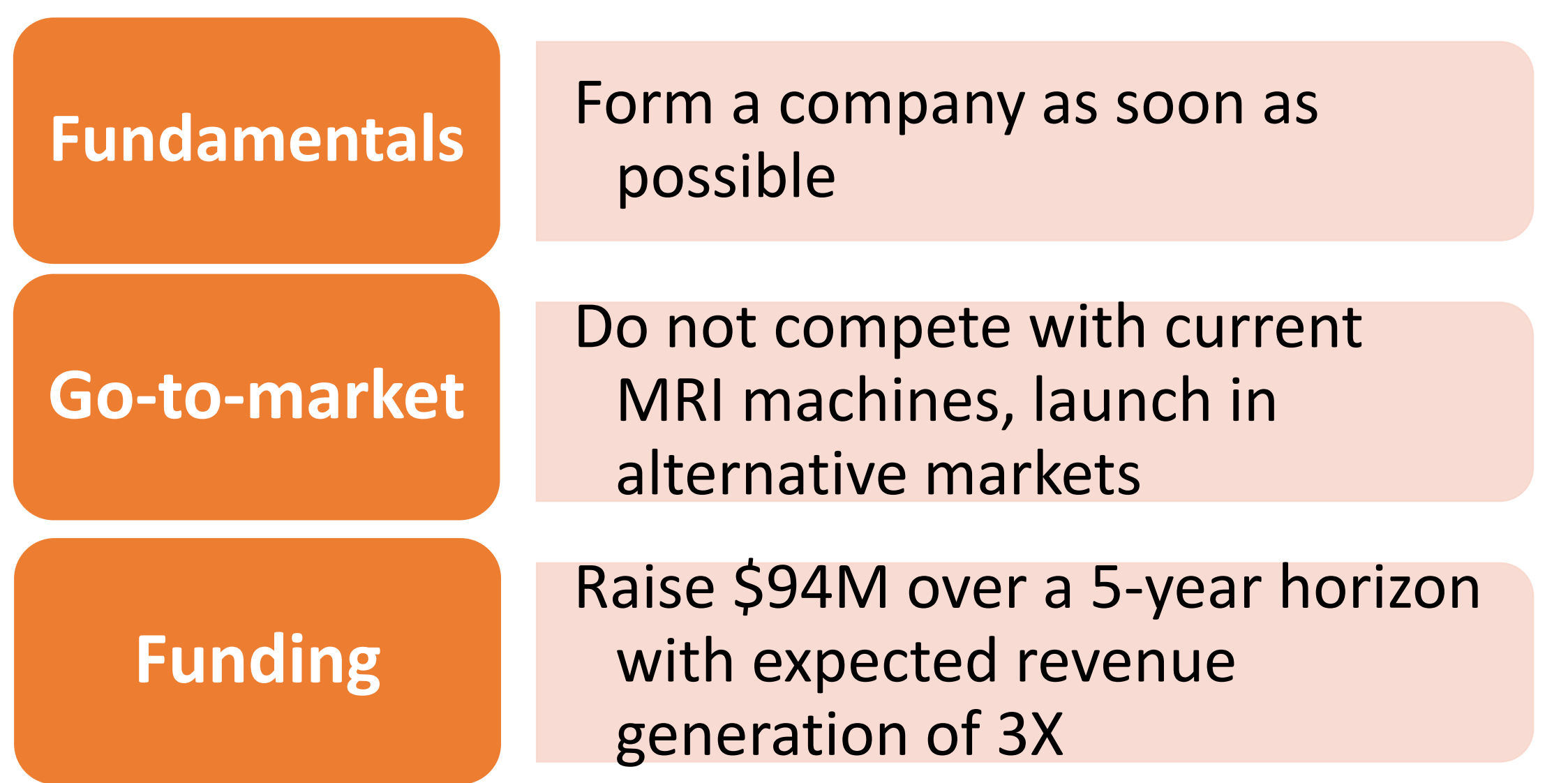
**Incumbents:** high-end of imaging market



**Niche MRI Innovators:** low-cost players

- MRI capital is **not primary cost driver**
- Payment structure is **arbitrary and varies** greatly
- MRI services **generate significant returns**
- Patient **does not bear the cost** of MRI exams

### Commercialization Recommendations

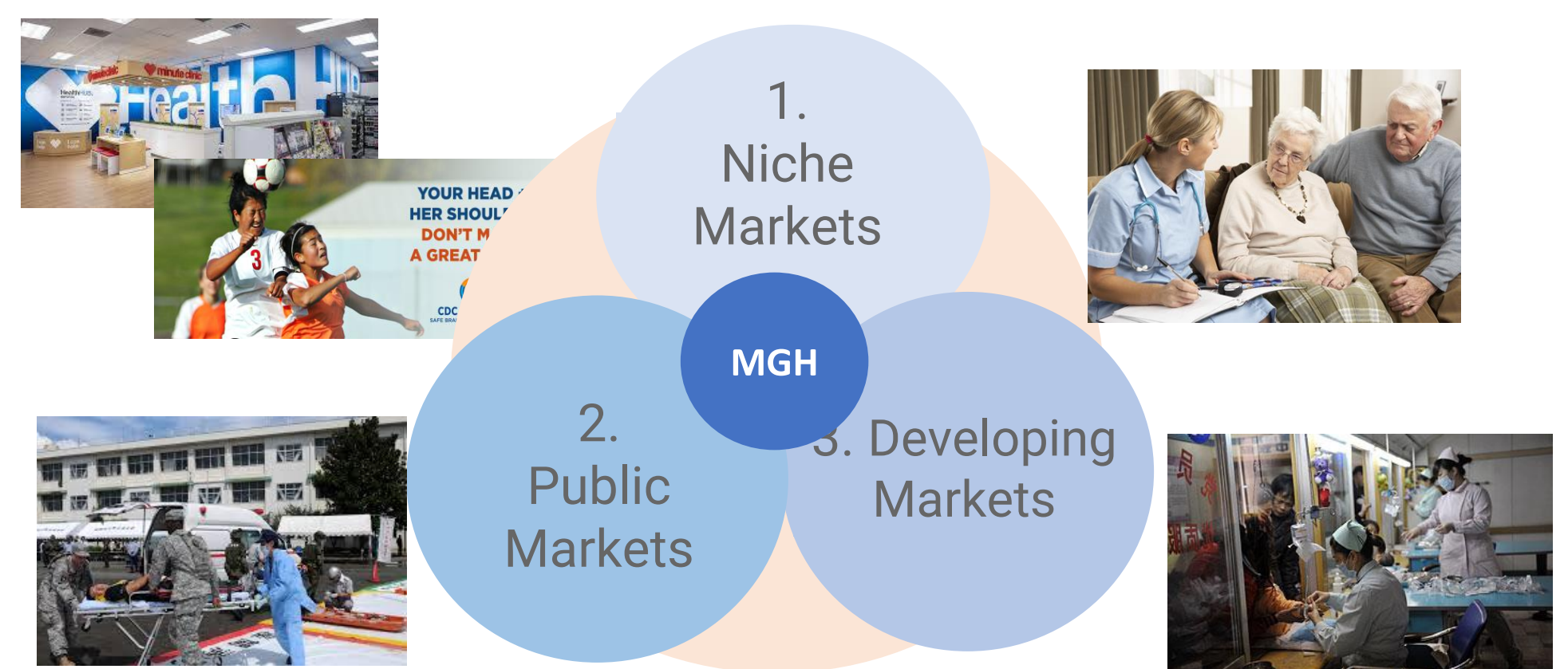


### Recommendation Breakdown

**Fundamentals:** Urgent need to make key strategic decisions

Category	Sub-Category	Decisions	Decision Variables
Company		When to form	Each milestone
		Who would the co-founders be	MAT members, external
		Choice of entity	LLC, S-Corp, C-Corp
		Equity splitting	Amount for each MAT and external member
		Who owns	University of Minnesota, Company
Regulatory		Which pathway	510(k) or other
		Which to conduct	Subject to regulatory decision
Funding		Which sources	NIH, angel investor, VC, DARPA
Commercialization	General	In which to invest first	US private niche markets, US public market, developing economies
	US Private Niche Markets	In which to invest first	Retail, elderly care, sports, academic research
	US Public Market	In which to invest first	Military, VA, prison system
	Developing Economies	In which to invest first	Developing countries

**Go-to-Market:** High unmet need with low competitive threats



1. Retail, Sports, Elderly Care, Academic Research
2. Military, VA, Prison System
3. India, Mexico, Kenya

**Funding:** Seed done, plan for Series A (manufacturing first units)



### Relevant Literature

### The Team

- Michael Garwood, Benjamin Parkinson, Konstantinos Bouloukakis, Mark Hunter, Mathieu Szmigielski, Mailin Lemke, Edgar Rodriguez-Ramirez, Robin de Graaf, Chathura Kumaragamage, Scott McIntyre, Terry Nixon, Ramon Gilberto Gonzalez. Abstract. “A compact vertical 1.5T scanner with shoulders outside the bore and window for studying motor coordination in human brain”
- Christensen, Clayton M, Richard Bohmer, and John Kenagy. “Will Disruptive Innovations Cure Health Care?” Harvard Business Review, 2000, 11.
- “Towards earlier diagnosis and treatment of disorders of the brain”. Accessed Nov 11, 2019, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5985426/>.
- “Entrepreneur hopes to make portable, point-of-care MRI a reality”, Accessed Oct 10, 2019. <https://www.healthimaging.com/topics/diagnostic-imaging/entrepreneur-portable-point-care-mri-reality>
- Sze-jung Wu. “Price Transparency for MRIs Increased Use of Less Costly Providers and Triggered Provider Competition.” <https://www.healthaffairs.org/doi/full/10.1377/hlthaff.2014.0168>



Gabriela Lamas Oporto *SCM20*  
Tan Chui-Mae *SFMA20*  
Divya Raghavan *MBA20*  
Dr. Ramon Gilberto Gonzalez *MGH*