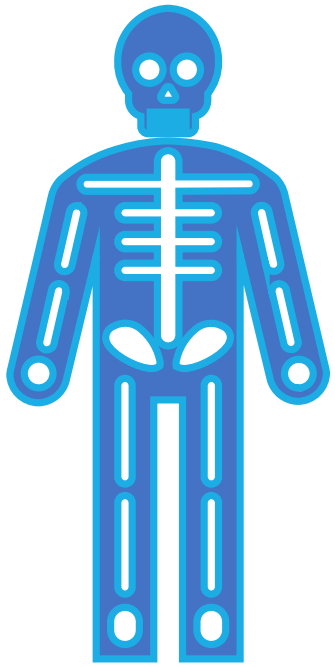
pegwin
Patient Safety Innovation

Reducing Health Care Costs Through Better Patient Outcomes

Pegwin Insights™ is an Artificial Intelligence (AI) platform used to prevent costly medical complications and patient harm while improving hospital financial performance.

PROBLEM



Patient Death Within 30 Days After Surgery

The 3rd leading category of mortality worldwide:

Preventable By Early Detection of Postoperative Patient Abnormalities

There Is A Global Unmet Need For Addressing Complications After Surgery

The 3rd leading category of mortality worldwide… In the US alone:

70% of surgeries have complications →
30 million patients

19% of surgeries end with fatalities within 30 days → ***5.7 million patients***

70% of complications occur within 6-8 hours after surgery

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MASSCHALLENGE FINALIST

CAPITAL FACTORY

Early Detection Leads to Timely Intervention

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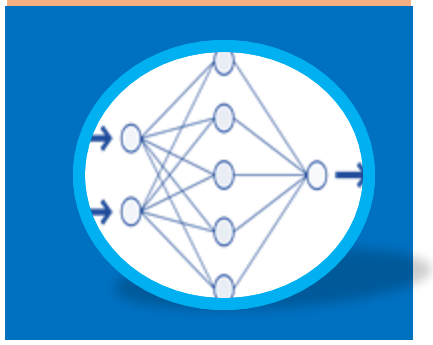
Patient Safety Innovation

Pre-Surgery
Assign Baseline Risk Profile Data

Surgery
Multi-Device Monitoring



Post-Surgery
Post Anesthesia Monitoring (6-8 hours)

General Ward
Recovery Observation (4 Days)

ICU
Extended Length Of Stay

Discharge
Continual Remote Patient Monitoring for 30 days

Proof of Principle

METHODS:

The preliminary study performed on >**15M randomized observations** (SMART DST2; SMART STU3; MIT, Harvard, Boston Children's Hospital) showed completeness, computability, and accuracy of the raw data sources (Fast Healthcare Interoperability Resources - FHIR).

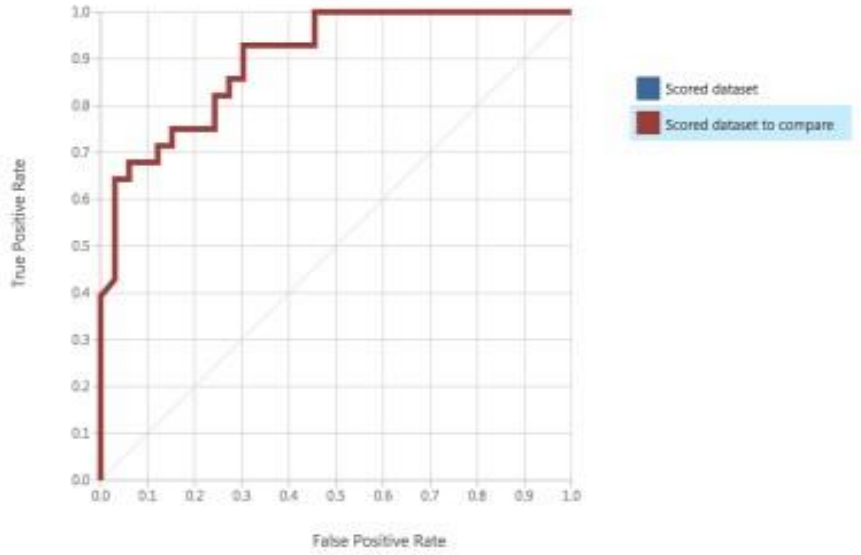
RESULTS:

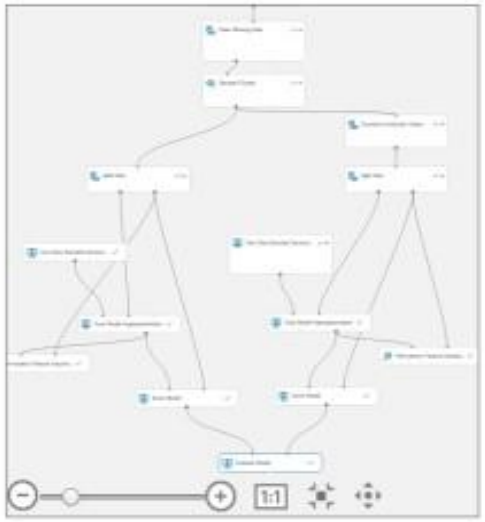
Cross-validated (70/30) **AI-Driven model** demonstrated good discrimination for unplanned ICU Admission - AUC 0.90; 95% CI, 0.76-0.94) and **performed as well, or better than the current models** (C statistic ranges: 0.56– 0.74).

The model calibration across different risk categories showed a **close association of predicted and observed outcomes –**

AHRQ Patient Safety Indicators:

* PSI 11 - Postoperative Respiratory Failure Rate
* PSI 04 - Death Rate among Surgical Inpatients with Serious Treatable Complications





True Positive	False Negative	Accuracy	Precision	Threshold	AUC
18	10	0.820	0.947	0.65	0.900

False Positive	True Negative	Recall	F1 Score
1	32	0.643	0.766

Positive Label	Negative Label
1	0

Score Bin	Positive Examples	Negative Examples	Fraction Above Threshold	Accuracy	F1 Score	Precision	Recall	Negative Precision	Negative Recall	Cumulative AUC
(0.900,1.000]	14	1	0.246	0.754	0.651	0.933	0.500	0.696	0.970	0.012
(0.800,0.900]	3	0	0.295	0.803	0.739	0.944	0.607	0.744	0.970	0.012
(0.700,0.800]	0	0	0.295	0.803	0.739	0.944	0.607	0.744	0.970	0.012

Data citations:

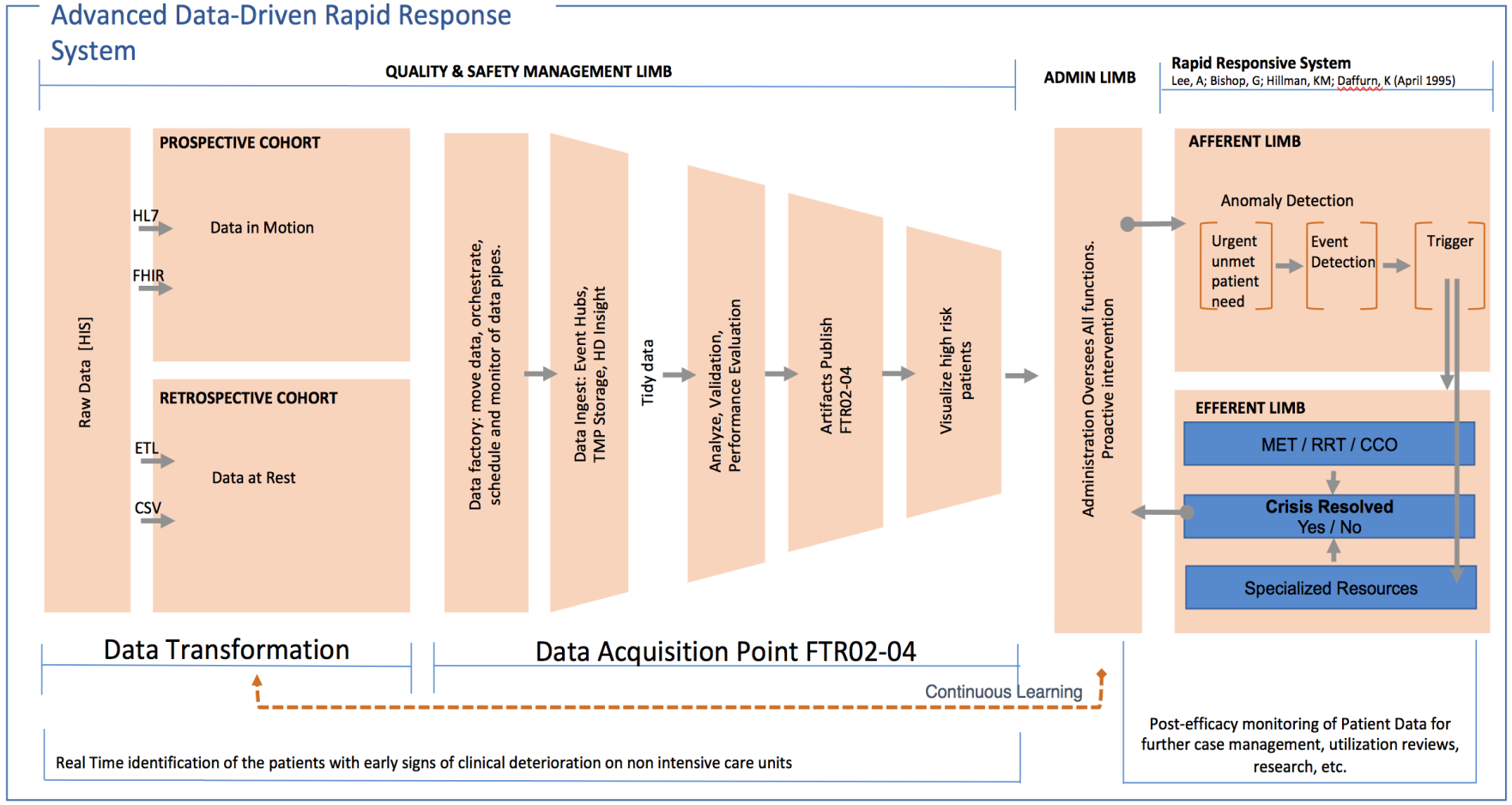
•http://dx.doi.org/10.13026/C2XW26
•http://dx.doi.org/10.1155/2014/781670

Continuous Health Data Monitoring in Opioids Induced Respiratory Depression in Post Operative Patients

Primarily focused on patients:

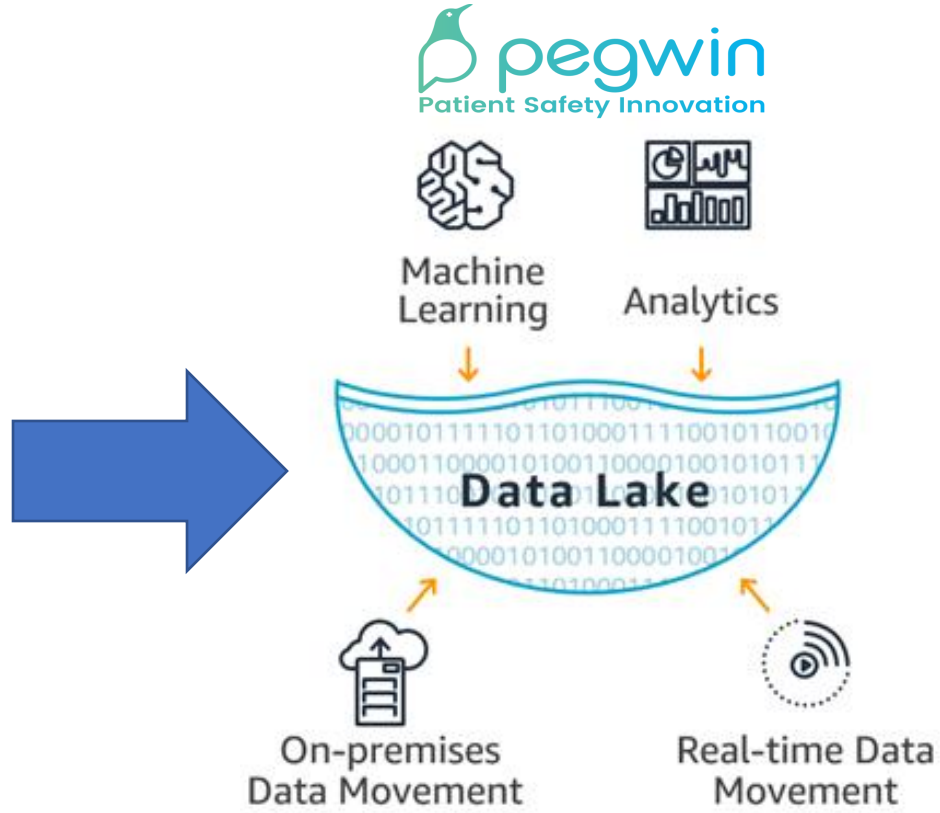
- All admissions
- In risk meeting OSA criteria
- Likely to result FTR indicators
- Likely to result in a RRT being called
- Likely to be readmitted within 30 days

- Pneumonia
- Sepsis
- Cardiac Arrest
- Respiratory Distress
- Pulmonary embolism
- DVT



Billions of Data Points & Thousands of Patient Records Power Pegwin's Engine

- Radiology
- Pharmacy
- Laboratory
- Observations
- Vital Signs
- Telemetry



Augmented Intelligence Predictive Models of Patient Deterioration to Intervene and Prevent Complications After Surgery

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MASSCHALLENGE FINALIST

CAPITAL FACTORY

Compelling Value Proposition

- **Prevent Medical Complications** Through Early Detection
  - Significant **Hospital Revenue** Source - With High Gross Margins
  - Substantial **Cost Reduction -** Improves Hospital's Bottom Line
  - **Better Patient Outcome** - Through **Improved Safety**
  - Addresses **Potential Racial Bias -** From Clinical Prognosis
- **Huge Market** Opportunity
  - Today: Improving Hospital Financial Performance and Patient Outcomes
  - **Future**: Total Care Management, Ambulatory Surgical Centers (ASCs), Long Term Care (LTAC) Facilities, Remote Patient Monitoring (RPM), Chronic Care Management (CCM), Behavioral Health

Our Comprehensive Approach to Care

Total Care
Monitoring and Management

Provider ⟷ pegwin Patient Safety Innovation ⟷ **Patient**

Transition of Care on the Communication Superhighway

PRISM Care

Trusted Patient Relationship

● Encouragement ● Nurse Coaching ● Health Literacy ● Engagement ● Support

CCM	**Medication Adherence**	**Self-Care** Wt. Management & Exercise	**Diet Management** Food as Medicine	**Education**	**Transition Care**	**Behavioral Health**	**RPM & Screenings**

TVP-Care provides "In-Home" primary care for patients without providers

The focus is on patients requiring that extra touch at home!!

TVP-CARE

Community-based care by training lay caregivers to become paid "clinical staff"

Fewer Hospital Admissions and Lower Patient Costs

Reducing Costs Through Better Patient Outcomes

- **Reduced Hospital Costs**
  - Reduce Length of Stay
  - Reduce Admissions to the ICU
  - Reduced Procedural Costs
- **Reduced Payor Costs**
  - Patient, CMS, Insurance
  - Reduced Patient Length of Stay
  - Reduced Admissions to the ICU
  - Reduced Surgical Costs
- **Lower Overall Healthcare Costs**
- **Increase Hospital Bottom Line**
  - Increase Surgical Procedural Profit in Fixed Cost Payment Model
  - Preserves Hospital Revenues Though Improved Quality Scores
  - Reduce Penalties For Patient Harm
  - Reduce Caregiver Burnout/Turnover
- **Patient**
  - Better Outcomes
  - Increased Patient Satisfaction

Pegwin Overview

- **What**:
  - Digital Health IT Company
- **How**:
  - Using AI To Establish Custom Patient Baselines Through Analysis Of Specific Patient Demographics And Records With A Cross Referenced Data Lake
- **Use**: Detect Early Deterioration Prior To A Complication In A Patient's Condition To Minimize The Treatment Costs Of The Patient
- **Result**:
  - Improve Bottom Line Through Better Patient Outcomes

- **Technology**:
  - Machine Learning and Medical AI
    - Retrospective Study to Validate AI Engine
    - Two ONC Awards
    - Large Cancer Hospital Study to Validate AI
    - Provisional Patent Filed
- **Why Pegwin**
  - *The Premiere Cancer Research Hospital Validating Pegwin Technology.*
  - Active Customer Deal Flow
  - Low Cash Requirement

Compelling Hospital Financial Proposition

Single Texas Hospital Example					
Pricing / Pegwin and Hospital					
Pegwin Revenue Per Surgery (Hospital Cost)			$150		
Pegwin One-Time Installation Fee			$250,000		
Hospital Revenue Per Surgery for Pegwin Service (paid by payor)			$250		
Complication Cost Assumptions and Calculations					
Hospital Complication Rate[1]			18.05%		
Average Cost per Complication[1]			$ 13,298		
Texas Hospital Average Monthly Surgeries			1,000		
Average Number of Monthly Complications			181		
Average Total Cost of Complications			$ 2,400,668		
Complication Cost Reduction Assumptions / Calculation					
Projected Pegwin Complication Reduction Rate			20%		
Average Number of Monthly Prevented Complications			36		
Average Monthly Savings due to Reduced Complications			$ 478,743		
[1] Costs and complication frequency based 6,387 patients across 14 different complication categories.					
Month	**1**	**2**	**3**	**...**	**Year 1**
Cash Outflow					
Pegwin Cost to Hospital	$400,000	$150,000	$150,000		**$2,050,000**
Cash Inflow					
Hospital Revenue (Charge for Pegwin)	$250,000	$250,000	$250,000		**$3,000,000**
Hospital Savings (Reduced Complications)	$ 480,134	$ 480,134	$ 480,134		**$5,761,604**
	$ 730,134	$ 730,134	$ 730,134		
Bottom Line Impact to Hospital	**$ 330,134**	**$ 580,134**	**$ 580,134**		**$6,711,604**

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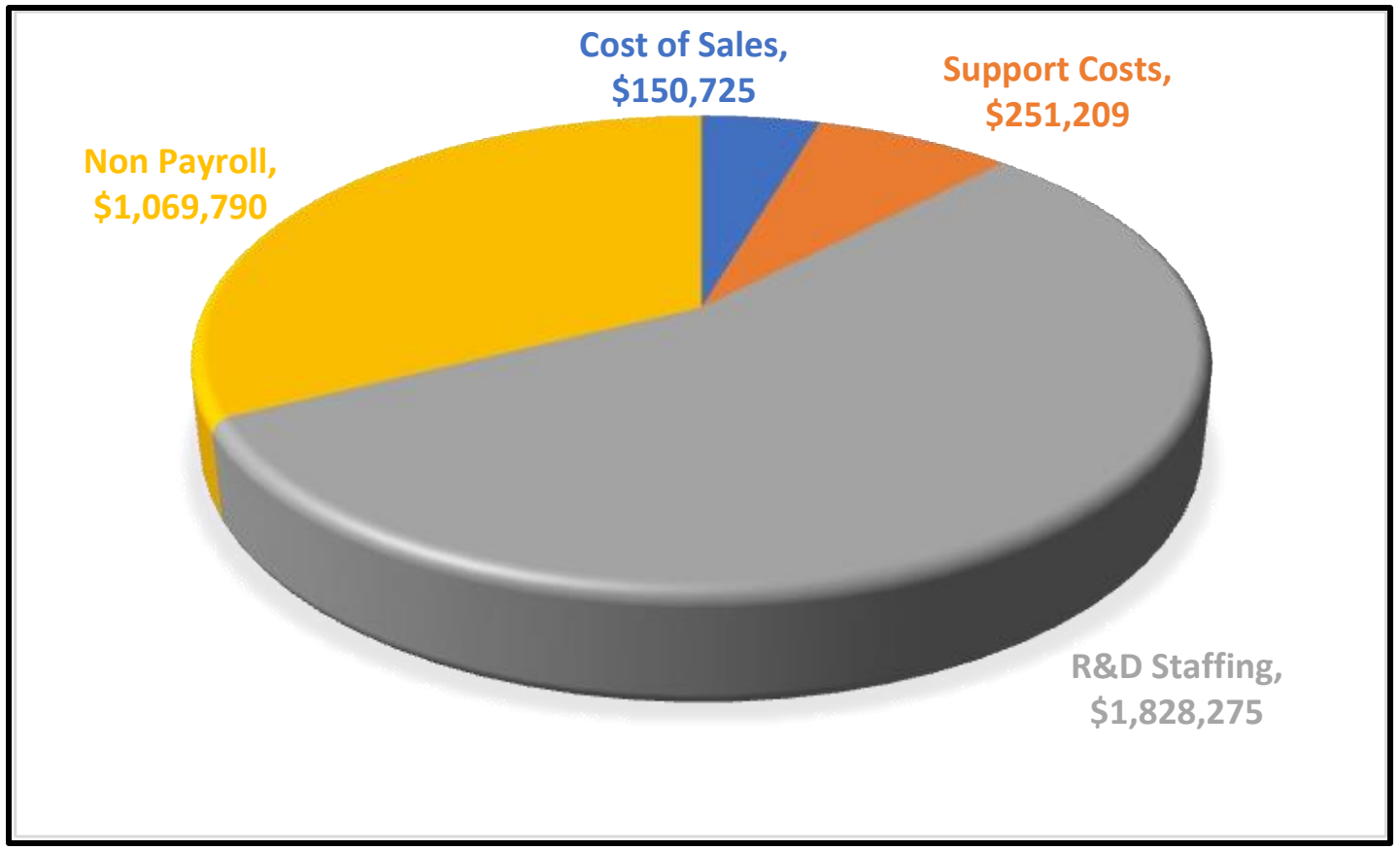
CAPITAL FACTORY

Financial Projections

		2024	2025	2026	2027
Revenue	***Hospitals***	1	8	32	56
Recurring Hospital Revenue		$ 272,500	$ 4,547,500	$ 21,390,000	$ 45,150,000
Ambulatory Surgery Centers		$ -	$ -	$ -	$ -
Long Term Acute Care		$ -	$ -	$ -	$ -
Remote Patient Monitoring		$ -	$ -	$ -	$ -
Total Care Management		$ -	$ -	$ -	$ -
Total Revenue		**$ 272,500**	**$ 4,547,500**	**$ 21,390,000**	**$ 45,150,000**
Cost of Goods Sold (Support, Sales, Installation)		**$ 78,460**	**$ 1,119,460**	**$ 5,090,640**	**$ 10,222,800**
Operating Expenses					
Personnel Expense		$ 785,417	$ 2,278,333	$ 3,036,667	$ 3,315,000
Non Payroll Operating Expenses		$ 596,244	$ 903,868	$ 1,454,598	$ 1,007,850
Total Operating Expenses		**$ 1,381,661**	**$ 3,182,201**	**$ 4,491,264**	**$ 4,322,850**
Net Cash Flow		**($1,187,621)**	**$ 245,839**	**$ 11,808,096**	**$ 30,604,350**

Revenue Opportunities Not in Finance Model

Use of Funds



Funding Request

- Convertible Note of Equity
- Funding Required
  - $3.3.M

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