



pdma

Connecting Innovators Worldwide

*Welcome! We will be starting soon*

# Student Innovation Competition SHOWCASE

PDMA Carolinas  
Program Event – 4/24/2026



# Navigation & Engagement

## Welcome to PDMA Carolinas Student Showcase A few logistical details before we begin...

- Please be sure your audio has been muted.
- Please add comments and feedback using the chat feature in Zoom
- You are welcome to pose questions in the chat feature during the presentations. These questions will be answered at the end of each session.
- Also, during the Q/A portion of each session, raise your hand, your microphone will be unmuted.
- We will be recording and sharing all approved content with you, post-event



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# PDMA Carolinas Board of Directors

<https://community.pdma.org/carolinas/home>



Sue Burek



Don Flucane



Cheryl Jacobs



Christina Todd



Jennifer Willson

The logo for PDMA, featuring the lowercase letters 'pdma' in a white, sans-serif font. To the left of the text is a stylized graphic of a globe with white dots and lines representing latitude and longitude, set against a blue and green background.

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# Visit us @ [pdma.org](http://pdma.org)

Established in 1976, the **Product Development and Management Association (PDMA)** is a global community focused on the unique set of integrated activities involved in the full lifecycle of product management **including innovation.**



Product development and management practitioners, academics and service providers across variety of industries



Online, interactive vehicle promotes PDMA as the primary facilitator of thought leadership and knowledge



PDMA's exclusive Outstanding Corporate Innovator Award has become the premier honor for industry innovators.



New Product Development Professional (NPDP) Certification -- internationally recognized designation



15,000+ international community members across 20 chapters



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# Carolinas Chapter

<https://community.pdma.org/carolinas/home>

PDMA Carolinas is a local chapter dedicated to building a stronger community of innovation professionals in the Carolinas



Charlotte  
Raleigh (RTP)  
Greenville

Community of more  
than 1200 individuals

We'd love for you to engage with us!

- Attend upcoming events
- Become a PDMA member
- Become a Carolinas Chapter board member
  - Marketing committee
  - Programs committee
  - Communications committee
- Become a Speaker and/or BoK Certificate trainer

Contact us:

[Carolinaschapter@pdma.org](mailto:Carolinaschapter@pdma.org)



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Visit us @ [pdma.org](https://www.pdma.org)

## 2026 Programs: Growing Product Development Skills

Today's Session!

April 24<sup>th</sup>, 2026

### **Student Showcase**

[On-line](#) with Student teams from local universities and their submitted innovation projects

May 19<sup>th</sup>, 2026

### **Win/Loss Interviews**

[On-line](#) with Jason Vincelette of Procurement Partners

June 16<sup>th</sup>, 2026

### **How Do Innovation Frameworks Move from Classroom Theory to Applied Measurable Impact inside a Global Organization?**

[On-line](#) with Brooke Rennison of BMW

October 8-11, 2026

### **PDMA Ignite Innovation Summit and JPIM Research Forum**

[In Person](#) Courtland Grand Hotel, Atlanta GA

Check out PDMA's Events page for all upcoming local and international events

<https://www.pdma.org/page/upcoming-events>

PUBLIC SERVICE ANNOUNCEMENT



# BUILD SOMETHING REAL

*Launch your venture while earning your master's.*

**UNC Charlotte's M.S. in Entrepreneurship** is a venture-focused graduate program designed for people who want to move from idea to execution in one of the fastest-growing business and innovation hubs in the Southeast.

You won't just learn about entrepreneurship — you'll engage directly with founders building companies across the region, gaining access to mentorship, investment networks and real opportunities to test and grow your venture.

1 year | Cohort-based model | 30 credit hours

*No GMAT/GRE required*

# THE DIFFERENCE IS CHARLOTTE

- Learn from leading entrepreneurs in Charlotte
- Engage with investors, mentors and the Charlotte startup ecosystem
- Build → Test → Refine → Launch
- Courses are shaped by industry input, regional demand and real-world application
- Graduate with real progress on something you've built

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## LET'S CONNECT

### **Ethan Chiang**

Associate Dean, Graduate Programs

Belk College of Business | UNC Charlotte

[ethan.chiang@charlotte.edu](mailto:ethan.chiang@charlotte.edu)

[belkcollege.info/msentre](http://belkcollege.info/msentre)



The logo for pdma, featuring the lowercase letters 'pdma' in a white, sans-serif font. To the left of the text is a stylized graphic of a globe with white dots and lines, set against a background of blue and green geometric shapes.

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GSIC2026

# 2026 Global Student Innovation Challenge

- Cash prizes for Finalists



- 1-year PDMA Student Membership for **ALL** participants
- Free attendance and showcasing of concepts at the PDMA Ignite Innovation Summit for Finalists
- Broad visibility in press releases, social media and articles on the *PDMA.org* website for participating winners

- Submission portal opened: **December 2025**
- Final submission date: **June 1, 2026**
  - (feel free to submit your idea any time now)
- Finalists announced: **June 20, 2026**
- Presentations and voting at PDMA Ignite Innovation Summit/JPIM Research Forum **October 8-11th, 2026** in Atlanta, GA, USA

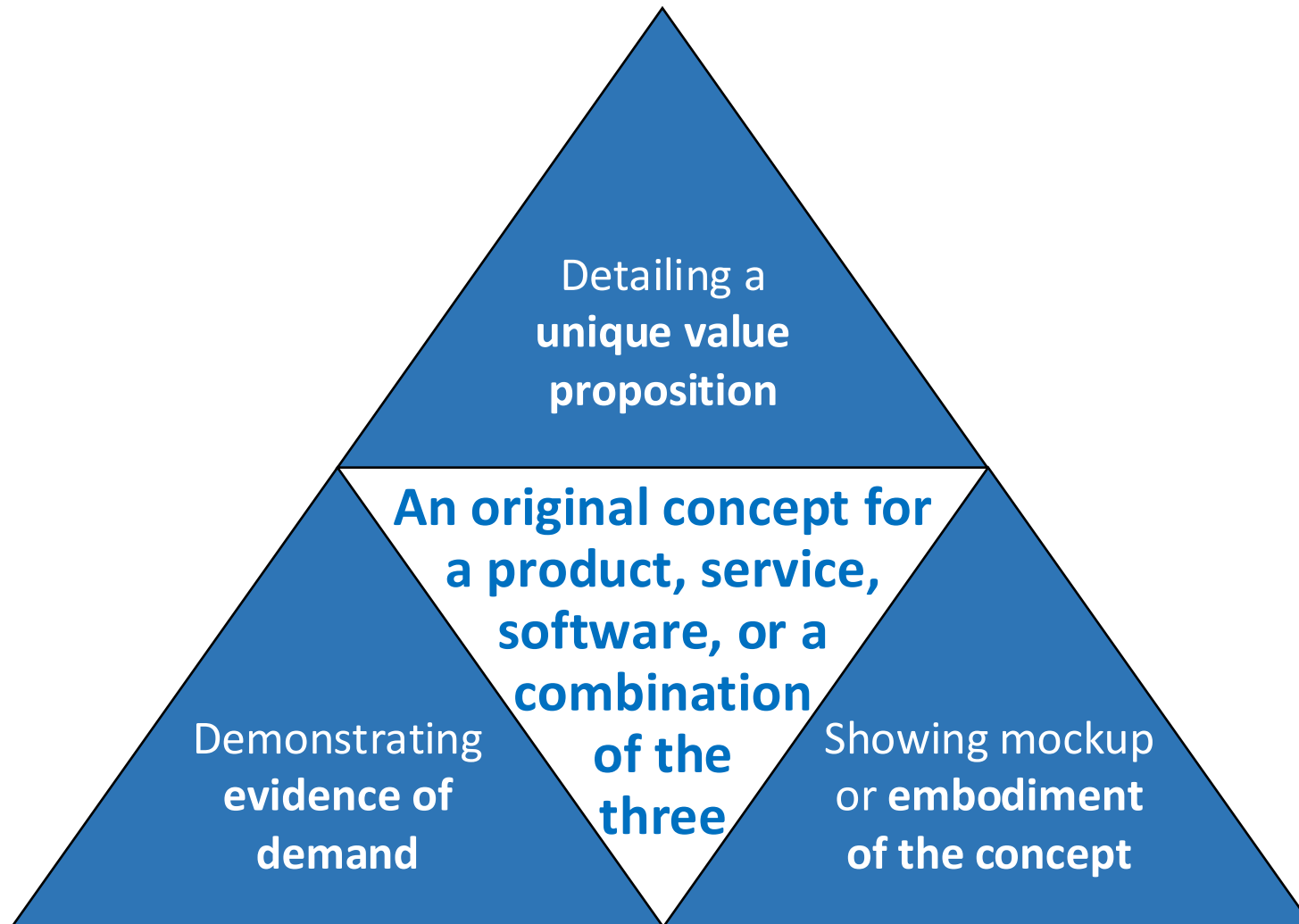


The background of the slide features a network diagram with white nodes and lines on a blue and green geometric pattern. The PDMA logo is positioned in the upper left corner.

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# PDMA Carolinas 2026 Student Innovation Competition SHOWCASE



## Is It Real?

Is The Market Real?

Is The Product Real?

## Can We Win?

Can The Product Be  
Competitive?

Can Our Company Be  
Competitive?

## Is It Worth Doing?

Will The Product Be  
Profitable At An  
Acceptable Risk?

Does Launching The  
Product Make  
Strategic Sense?



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# PDMA Carolinas Student Innovation Competition Details and Incentives

- Cash prizes for top 3 teams after judging against RWW Rubric
- 1-year PDMA Student Membership for **ALL** participants
- Broad visibility in press releases, social media and articles on the *PDMA.org* website
- Feedback for submission to [GSIC2026](#)



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# PDMA Carolinas 2026 Student Innovation Competition

- Universities participated: Clemson, NCState, UNC Chapel Hill, and Western Carolina
- **8** teams submitted projects
- **29** students participated
- **8** Faculty advisors guided their students
- Competition continuous since 2010



**Team name:**

Bright Futures

**Product name:**

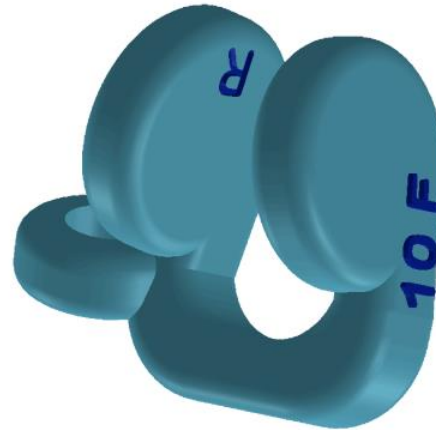
NasoSense

**University:**

Clemson

**Faculty advisor:**

Tyler Harvey

**Team members:**

Bridget Kollman

Paige Sciarra

Rachel Sepaniak

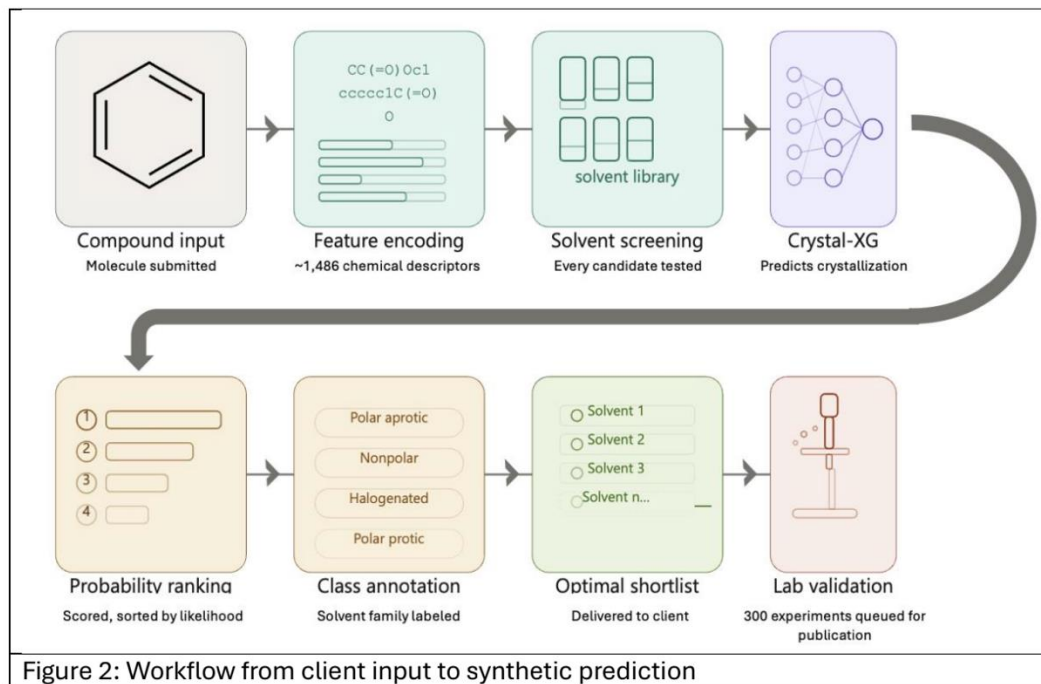
Kirsten Scro

**Team name:**  
Crystal-XG

**University:**  
UNC Chapel Hill

**Faculty advisor:**  
Dr. Colin McMillen

**Team members:**  
Lukas Garcia  
David Floyd





# 2026 PDMA Carolinas Student Competition

## Innovative Product pitch from students

**Team name:** Kiku

**University:** NC State

**Faculty advisor:**  
Kenneth Proseus

Notability-Speechify  
workflow App:  
a platform that  
integrates visual and  
audio based  
productivity

**Team member:**  
Zander Modares-  
Razavi

**Team name:** MAKHIR

Medical

**Product name:** HemoScan

**University:** Clemson

**Faculty advisor:**

Dr. Tyler Harvey

Dr. Vishal Thomas

Lucas Schmidt



**Team members:**

Anna-Kay Pitts

Ryan Hood

Isabella Kerr

Katharine Greene

Madison Roush

Hannah Hobbs



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# 2026 PDMA Carolinas Student Competition Innovative Product pitch from students

**Team name:**

TaskGator

**University:**

Western Carolina  
University

**Faculty advisor:**

Dr. Lane Perry

AI-Powered  
Student Course  
Assistant for  
Canvas LMS

**Team member:**

Tony Stone

Bright Futures



**Bridget Kollman**



**Paige Sciarra**



**Kirsten Scro**



**Rachel Sepaniak**

In partnership with: Clemson Department of Bioengineering, Clemson Makerspace, Prisma Health  
Clinical Collaborator: Jonathan Markowitz, M.D. and Cory Jones, M.D.

# Problem: Nasogastric (NG) Tube Dislodgement

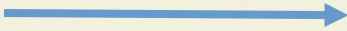
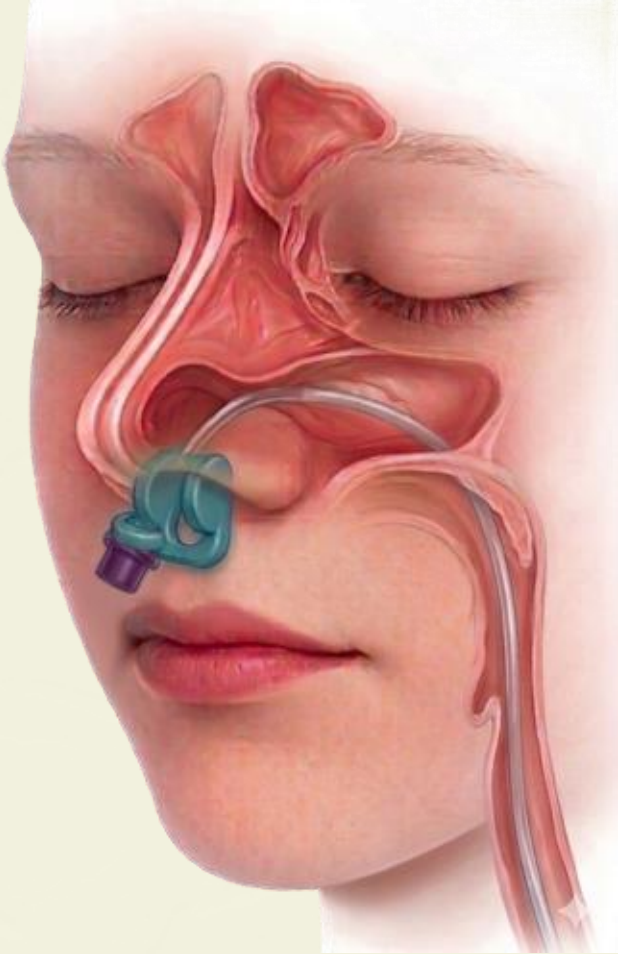


Children being treated for gastrointestinal diseases need a safe and efficient way to receive nutrition.

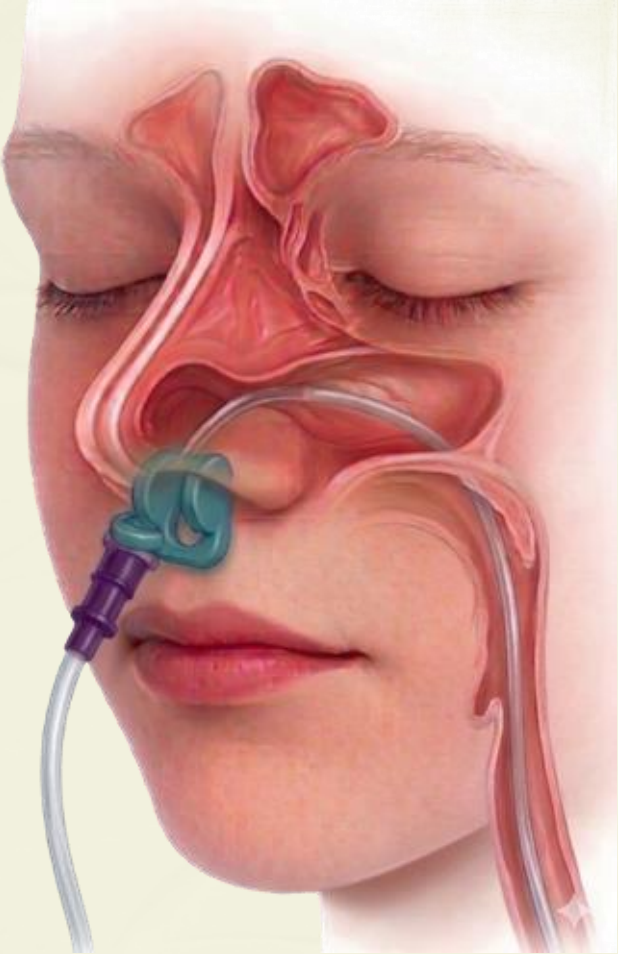


**BRIGHT  
FUTURES**

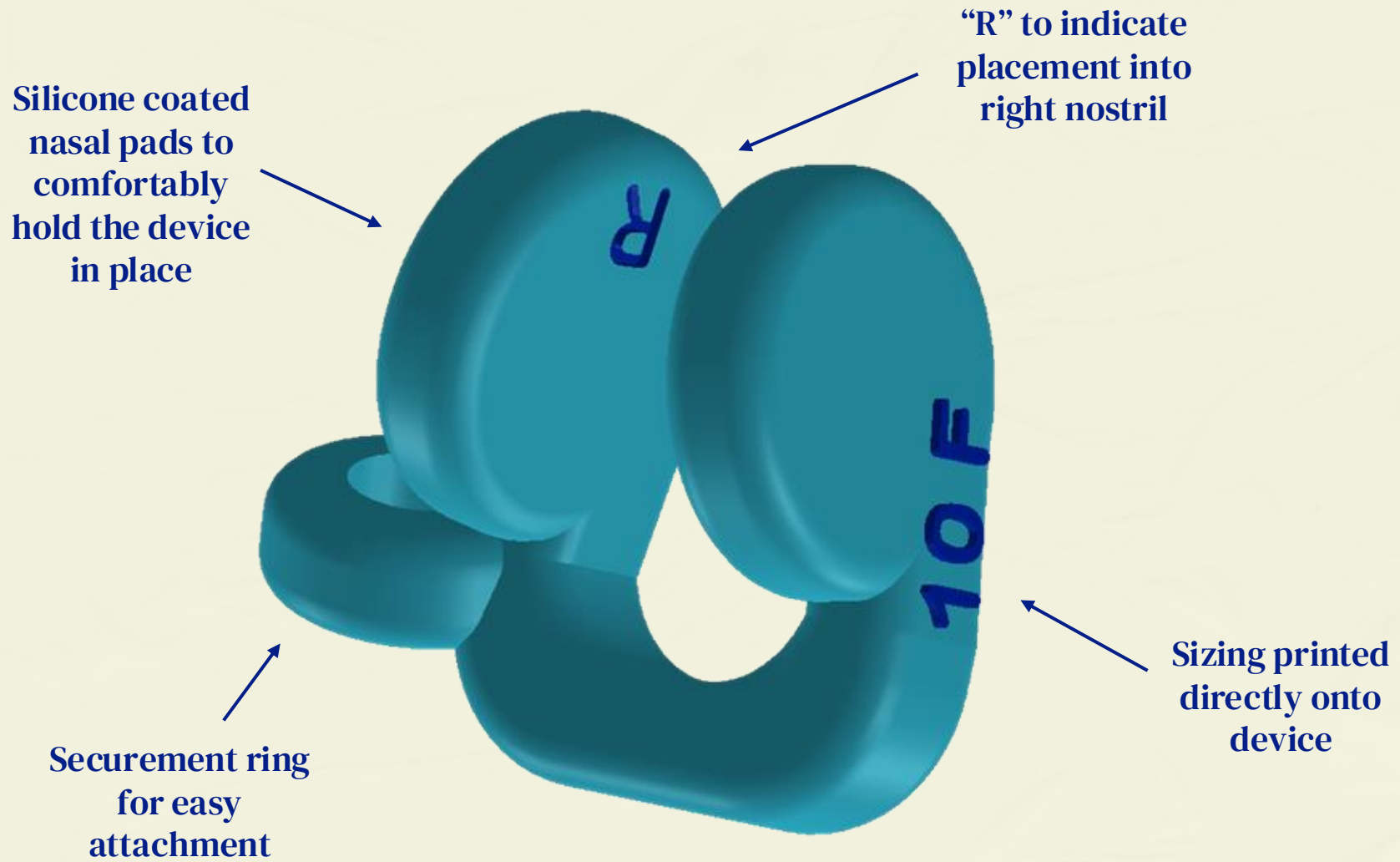
Resting/Active



Feeding



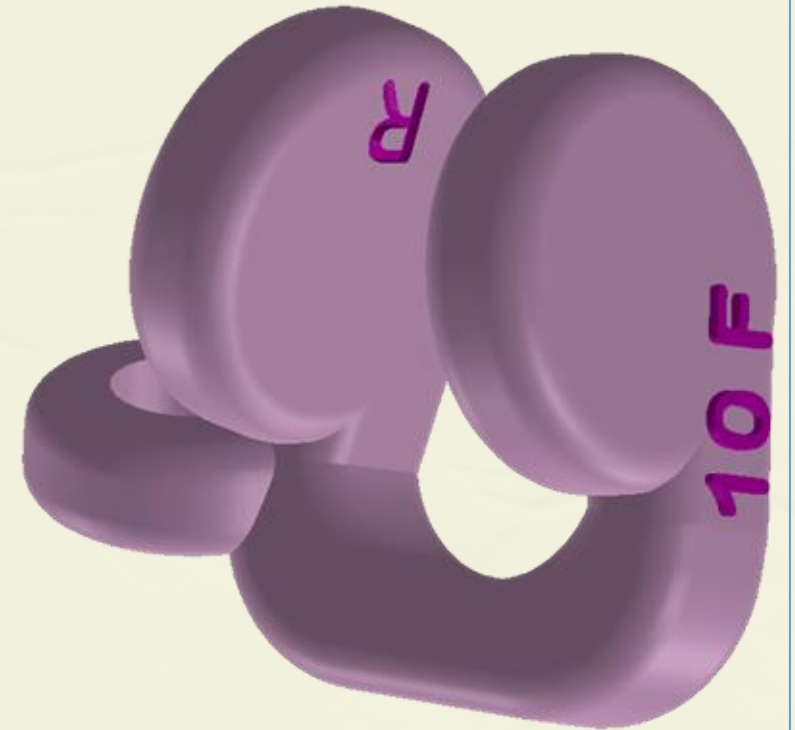
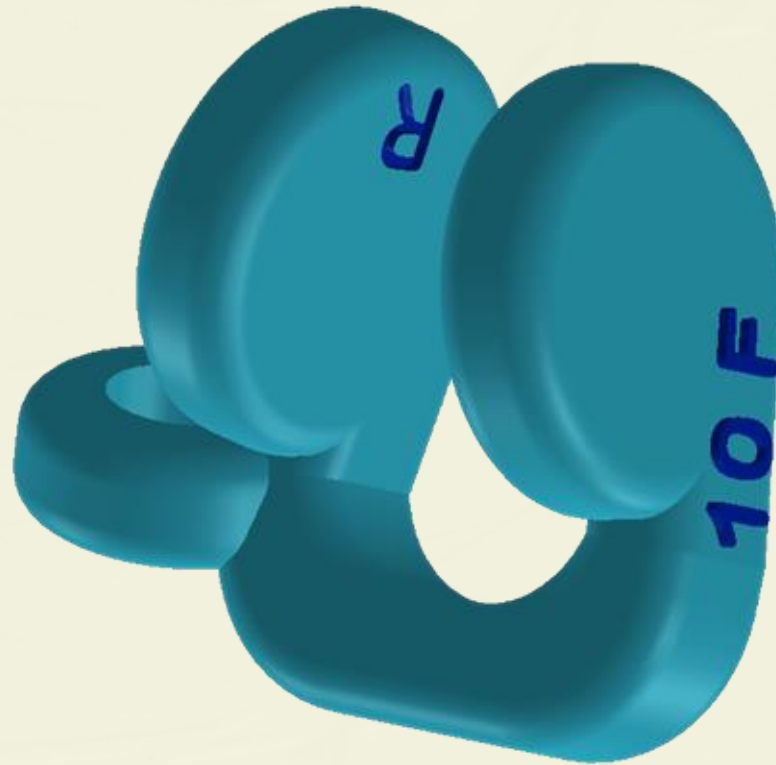
**BRIGHT  
FUTURES**



# Specifications

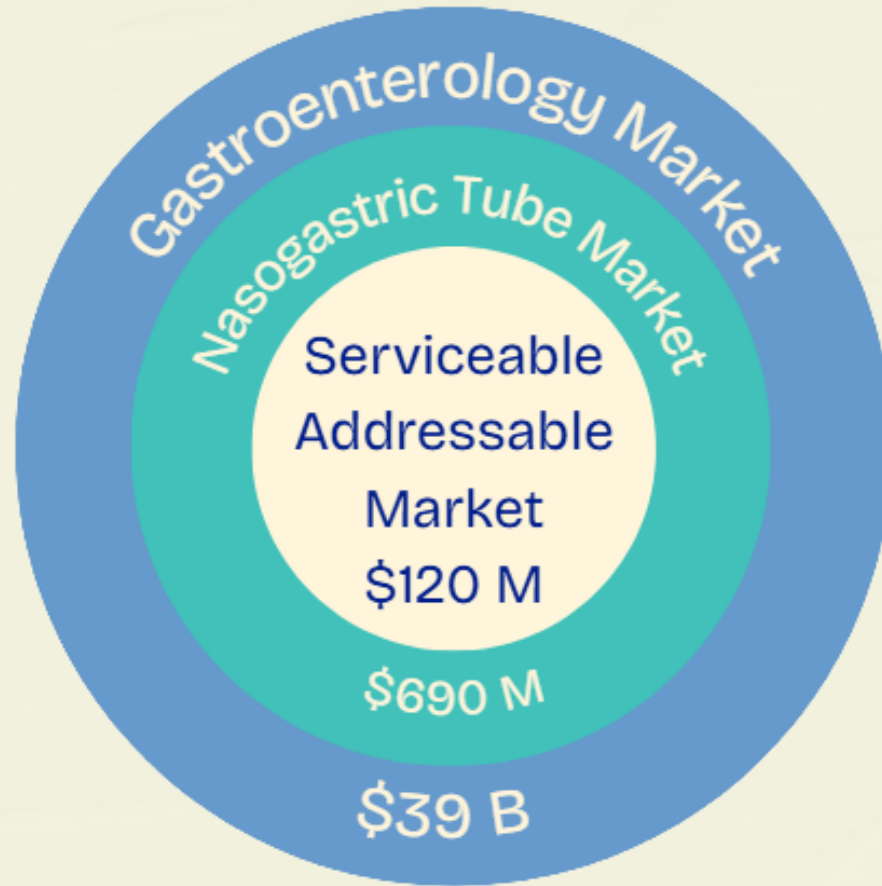
NasoSense will be offered in the following sizes to accommodate children from 0 to 17 years old:

- 6 French
- 8 French
- 10 French
- 12 French



**BRIGHT  
FUTURES**

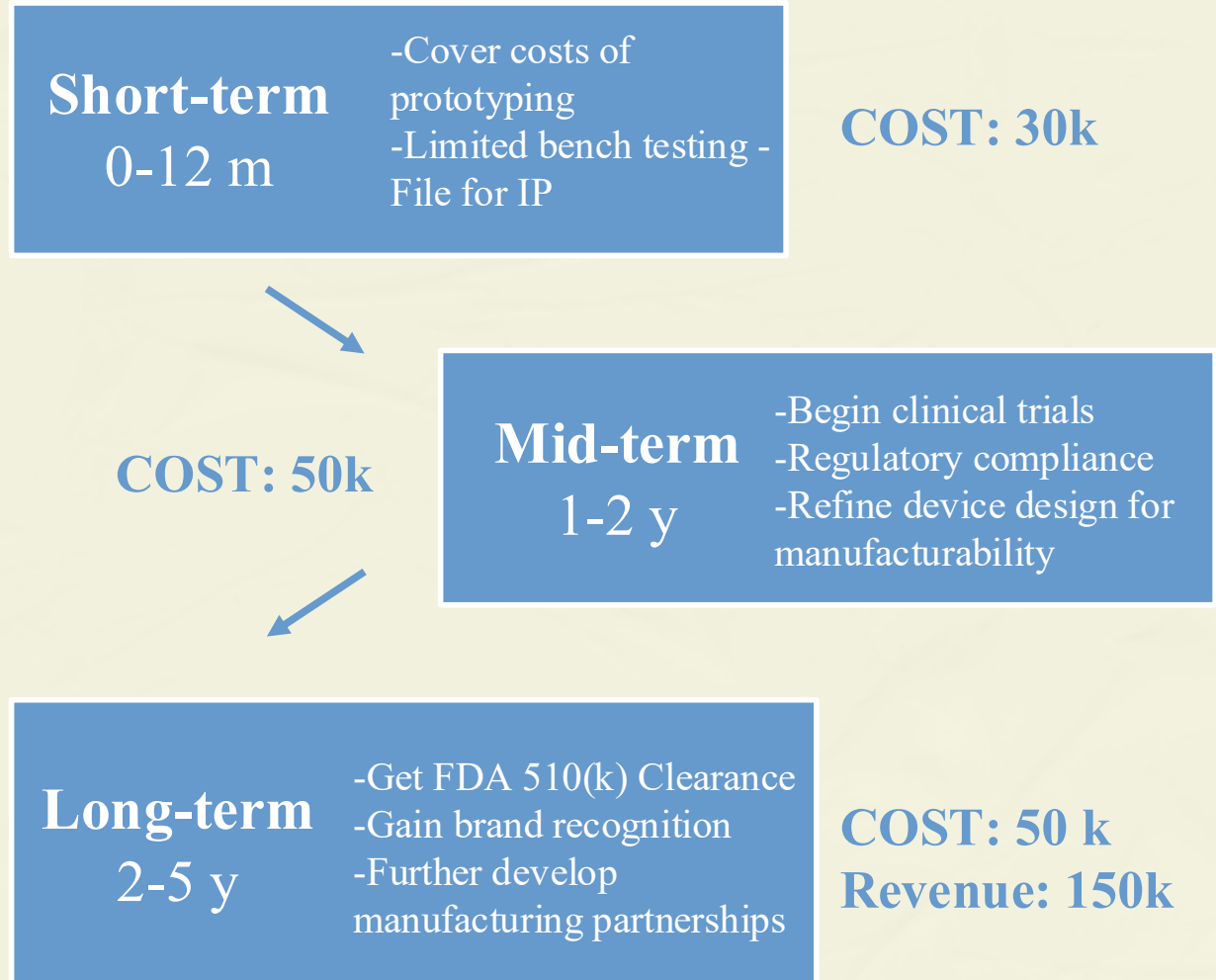
# Market Analysis



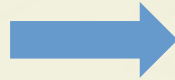
# Pricing and Cost Analysis

## Pricing Sample

- **COGS per unit: ~\$8**
- **Retail Price: \$20–\$22**
- **Gross Margin per unit: ~60–75%**
- **High volume potential in pediatric hospitals and homecare markets**



# Physical and Economic Impacts



NasoSense will reduce hospital readmissions by 90%, improving **nutrition, growth, and recovery outcomes** of patients and saving families **thousands of dollars**.



**BRIGHT  
FUTURES**



A special thanks to our collaborators and the sponsors of the  
PDMA Carolinas Student Innovation Competition!



Crystal-XG



**Unlocking Solid-State Potential**

# Why Do We Need Crystals?



90% of pharmaceutical compounds are crystals

Crucial in the drug development process

Gives scientists insights into:

1. Structure
2. Purity

But crystals are hard to grow



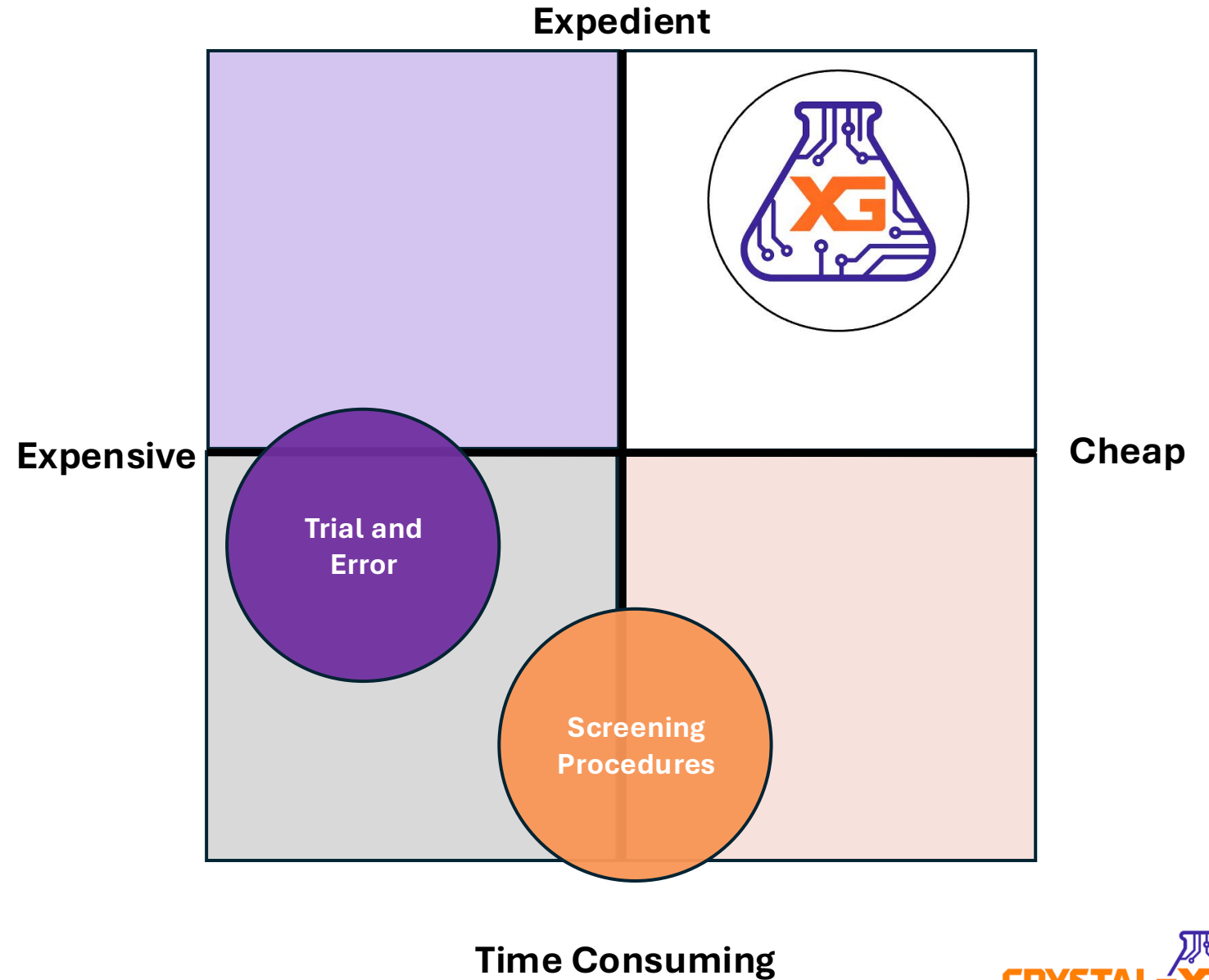
# Problem Continued

Only 1% Success Rate

Guesswork

Environmentally  
wasteful

# US vs. Them

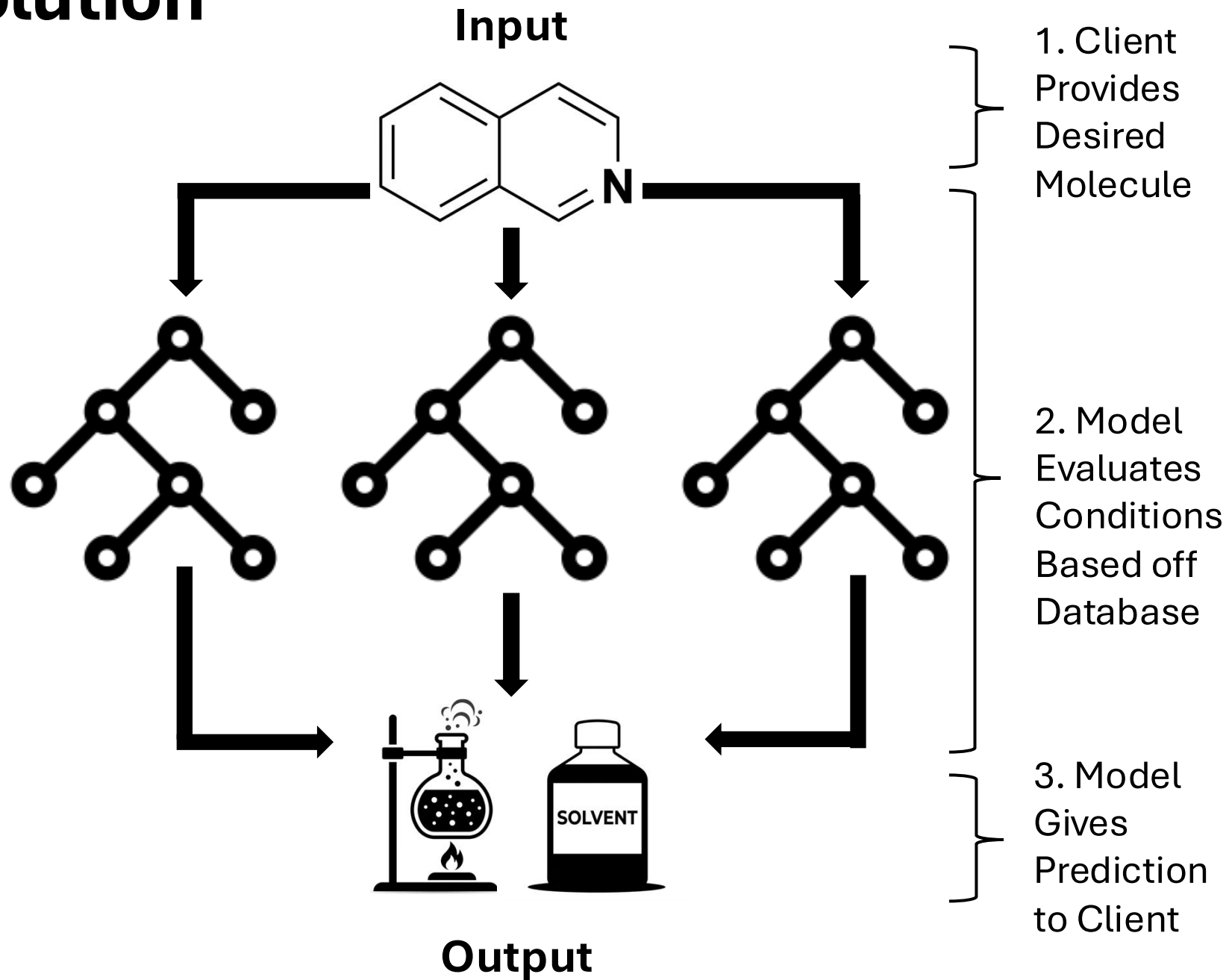


# The Crystal-XG Solution

Largest database in the world

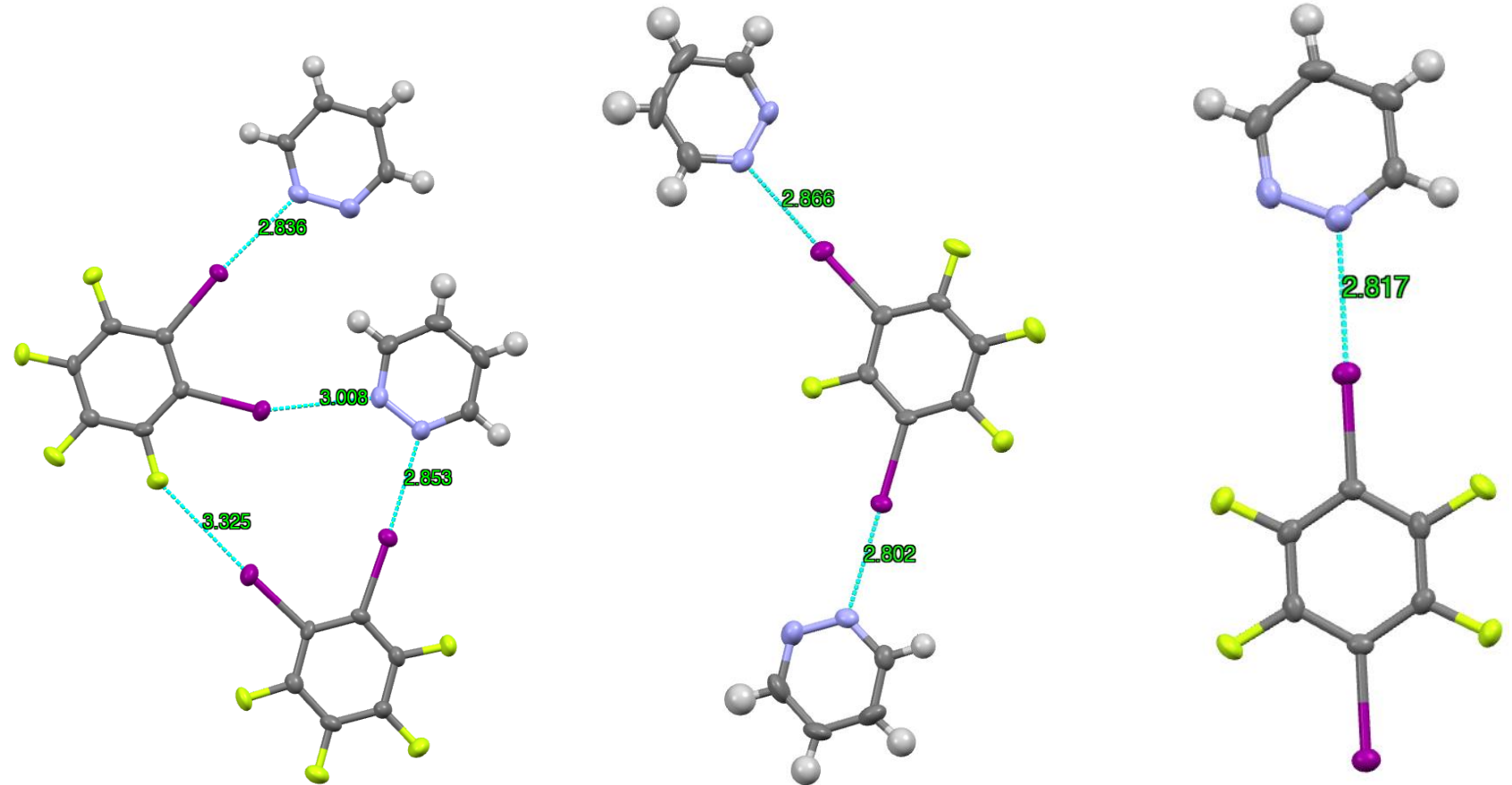
90% accuracy  
(18x increase)

Analysis shortened from  
months to minutes



# Experimental Validation

- Grown from predictions given by model
- Never seen before in the literature; characterized at Clemson's Molecular Structure Center
- 150+ ongoing experiments for publication



Pyridazine cocrystals with ortho (left), meta (middle) and para diiodo tetrafluorobenzene (right)



# Revenue Model

## Subscription:

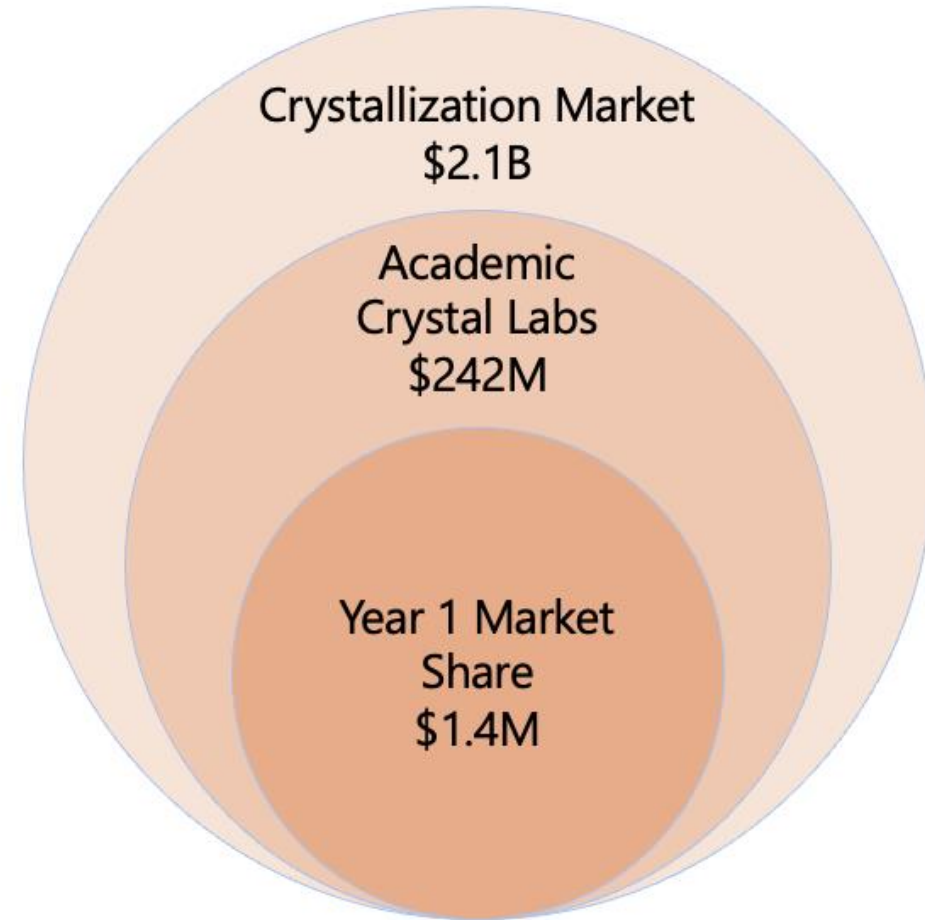
\$5,000 per Month

## Our Costs:

~ \$530 per Month

## Expected Savings to Clients:

> \$15,000 per month +  
time savings



# Our Team

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**Lukas Garcia**  
Founder  
Clemson University



**Ashwin Rao**  
CTO  
Rice University



**David Floyd**  
Full Stack Engineer  
UNC Chapel Hill



**Vincent D'Angelo**  
Operations Officer  
Princeton University

# Advisory Board

---



**Dr. Lucas Ayres**  
Postdoctoral Fellow  
Princeton University



**Dr. Carlos D. Garcia**  
Professor and Founder of MIGMA  
Clemson University



**Dr. Christer B. Aakeröy**  
Dept. Head and Taylor Chair  
Kansas State University



**Trey Larkins**  
Business Analyst  
McKinsey & Company

# Our Partners

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Check us out!  
[www.crystalxg.org/](http://www.crystalxg.org/)

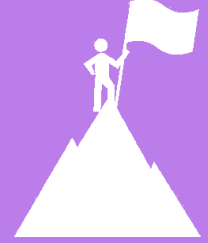


# Takeaways

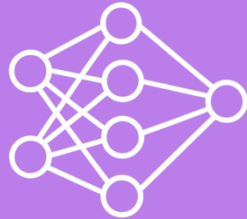
1. Current need for fast crystal growth



2. Limited Competition



3. Neural Network (90% Accuracy)



4. Have a defined & reachable market



5. Eight National + International Deployments



6. Low operating costs & high margins



# Appendix: Costs

## Our Costs per Year:

- Hosting - \$2,400
- Outreach - \$4,000

Total Costs per Year: \$6,400



## Cost of Current Approaches:

- 2 Grad Students - \$70k
- Dataset – 6 months salary (\$15k)
- Model – 3 months salary (\$7.5k)
- CS/Chem knowledge
- Lost research time! (Grant timelines)

Subscription per month: \$5k

Kiku

Kiku

Zander Modares-Razavi

# Text-to-Speech

I read a lot of  
AI safety  
papers and  
blog posts



There are hours I have  
during the day where I'm  
walking or driving when I  
could be listening to them



So I tried out the  
largest text-to-  
speech platform:  
Speechify



# The Solution: Kiku









A truly native  
notetaking  
experience



# Market Size

- There are 50M+ Speechify users
- 134M Americans have listened to an audiobook — 51% of US adults
- The Voice AI Market is expected to grow from \$4.16B in 2025 → \$20.71B by 2031

# Competitors

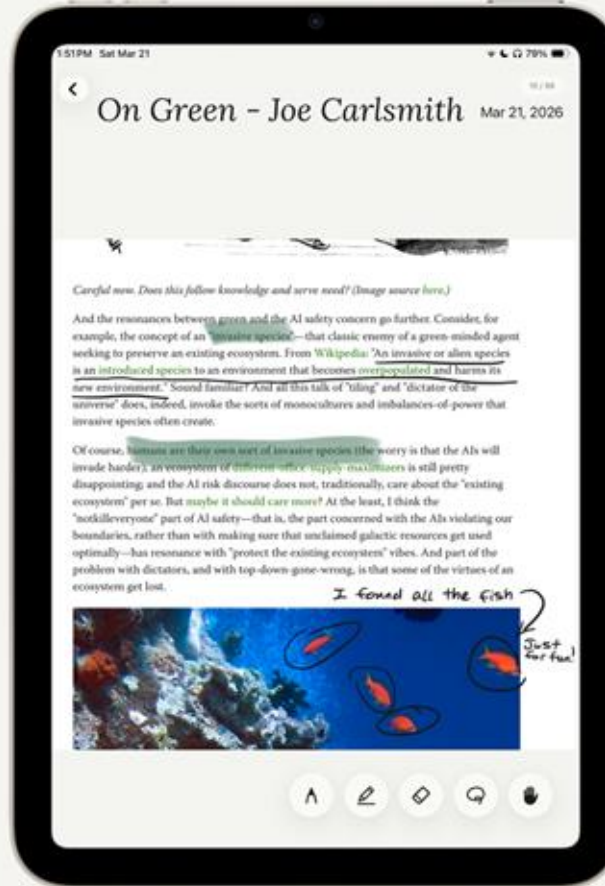
	Notability	Speechify	Kiku
Note-taking			
Text-to-speech			

*Only Kiku has both.*

# Your knowledge, *curated*

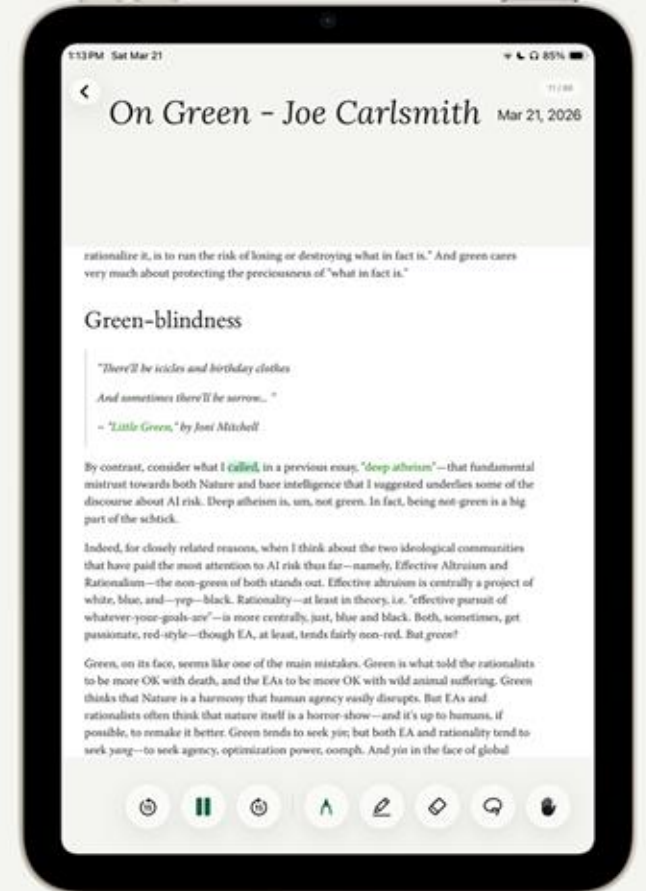


# Apple Pencil



# Note Taking

# PDF Reader AI Text-to-Speech



# Product Status

## Recent Additions

- Approved by Apple for the App Store
- Mac app
- Voice cloning
- AI-powered preprocessing

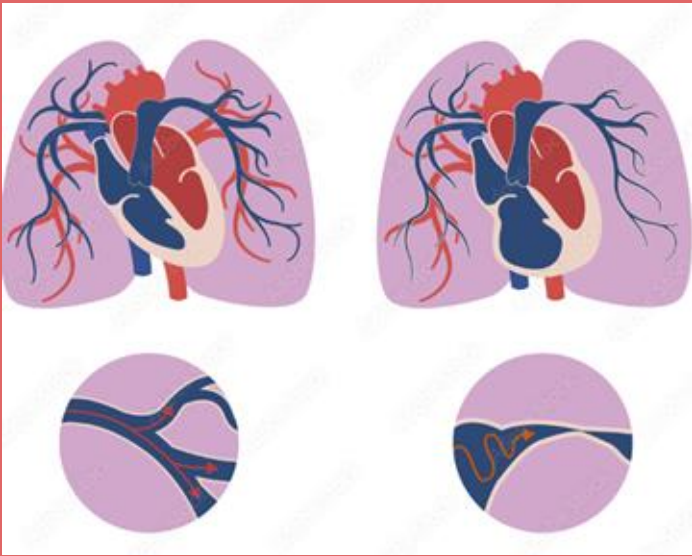
## Coming Next

- Micro-influencer launch on YouTube/TikTok — We'll start with 3–5 creators, double down on what converts
- Playlist feature for uninterrupted listening

Kiku

Makhir Medical





**Disease State**

**High Mortality**



**Diagnosed too**

**Late  
Frequent Misdiagnosis**

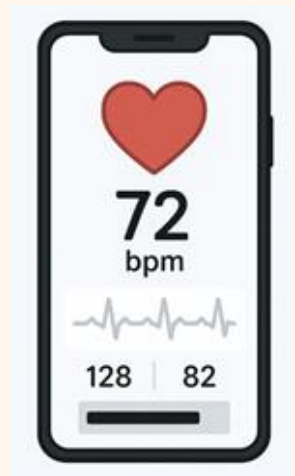
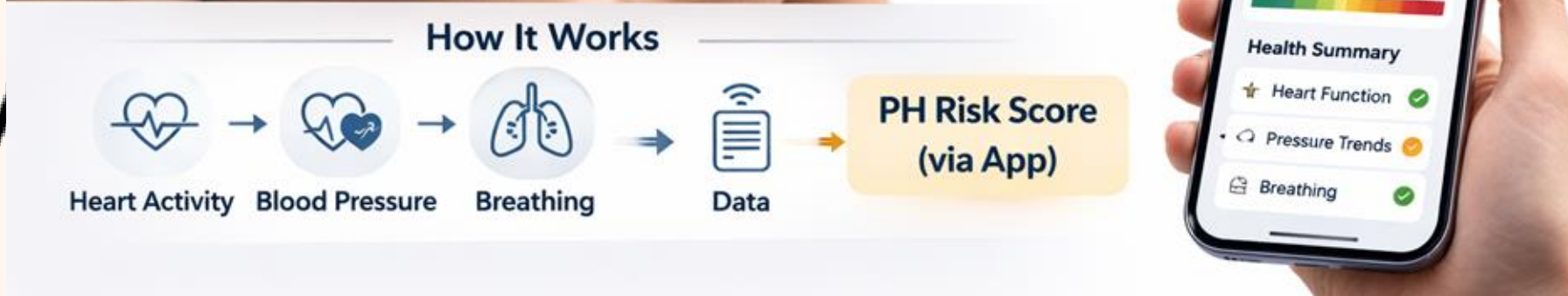


# The HemoScan

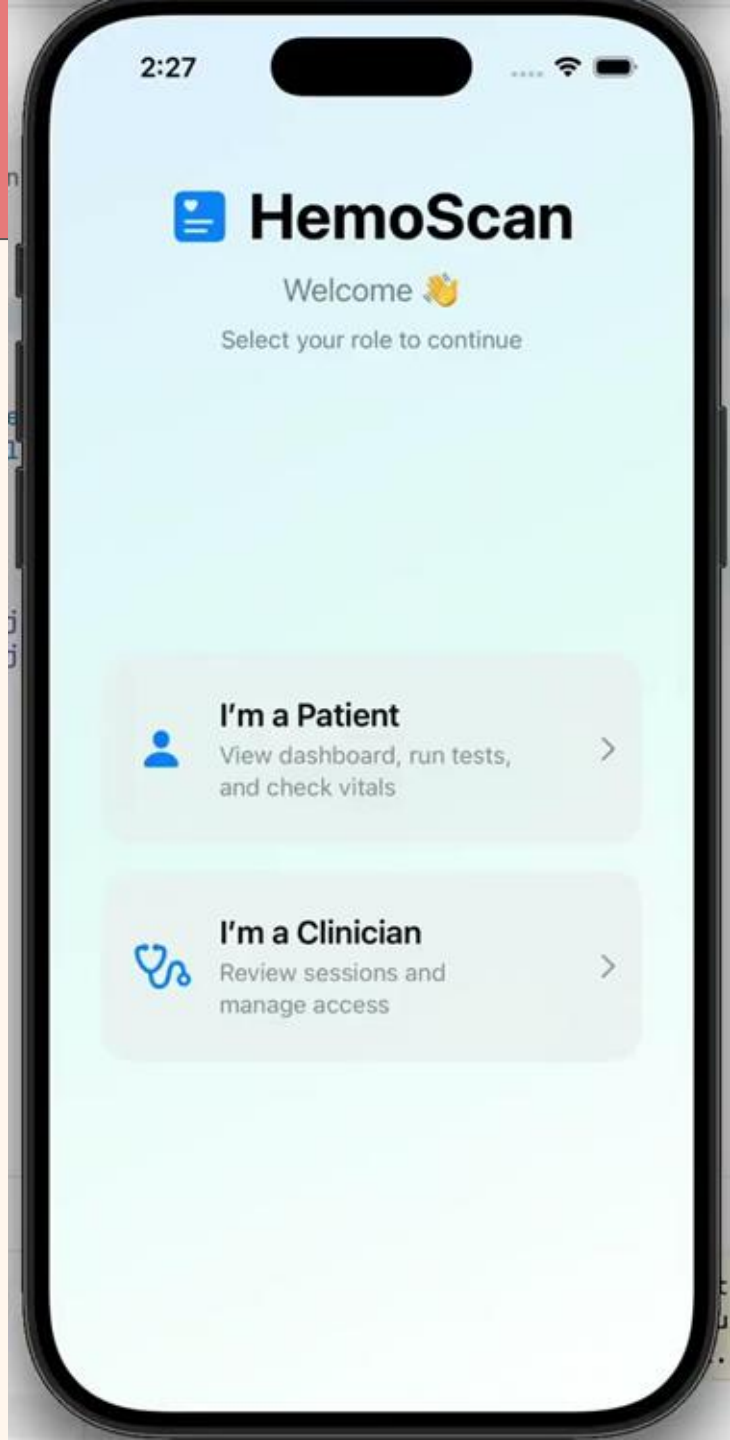


# The HemoScan Sensor

## Components



# Prototype of The HemoScan



# User Experience Storyboard



**HemoScan Companion**

 **Perform Standardized Test**

 **Passive Monitoring**



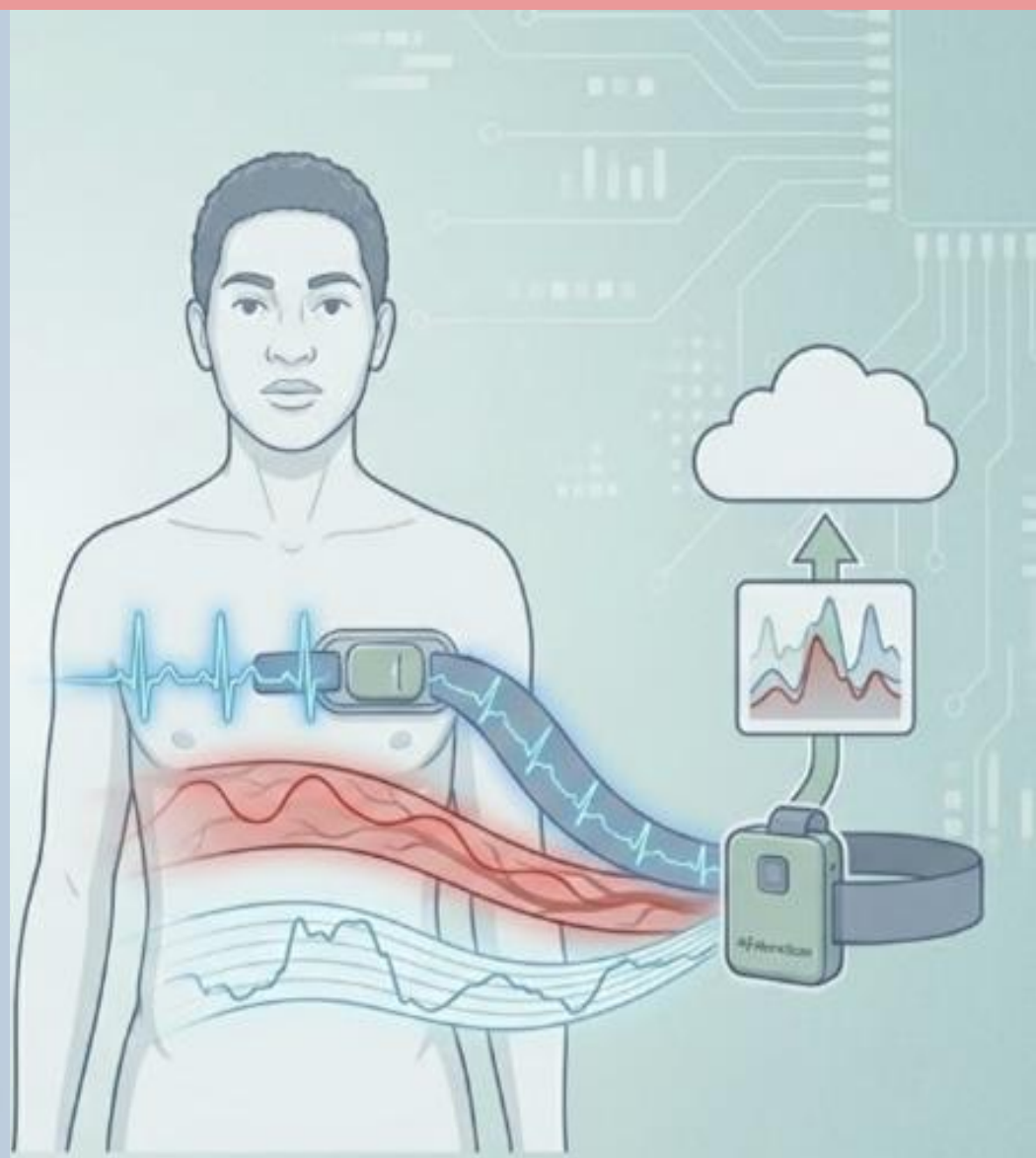
Status: Active - Data Collecting

**Trends**    **Activity**

**Weekly Activity Trend**



 **Today's Check-in Color**  
Status: Good



# Social Environmental Impact



## Improved Patient Outcomes

- Earlier diagnosis
- Improved long-term outcomes



## Clinician Efficiency

- Faster decisions
- Reduce unnecessary tests



## Healthcare Equity

- Lower treatment costs
- Reduced long term care burden

# Pulmonary Hypertension Market

## Individual Patient Cost



Often six-figure annual cost  
**PER PATIENT**



# Here to help with all your Pulmonary Hypertension

## needs



Madison Roush  
Project Lead



Anna Kay Pitts  
Documentation Lead



Katie Greene  
Design Lead



Isabella Kerr  
Communication Lead



Ryan Hood  
Research Lead



Hannah Hobbs  
Prototype  
Lead



**Thank  
You**

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TaskGator

# TaskGator

AI-Powered Assignment Organization  
for Canvas LMS

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# The Problem

86%

of students say disorganized courses  
waste their study time

*Simple Higher Ed, 2025*

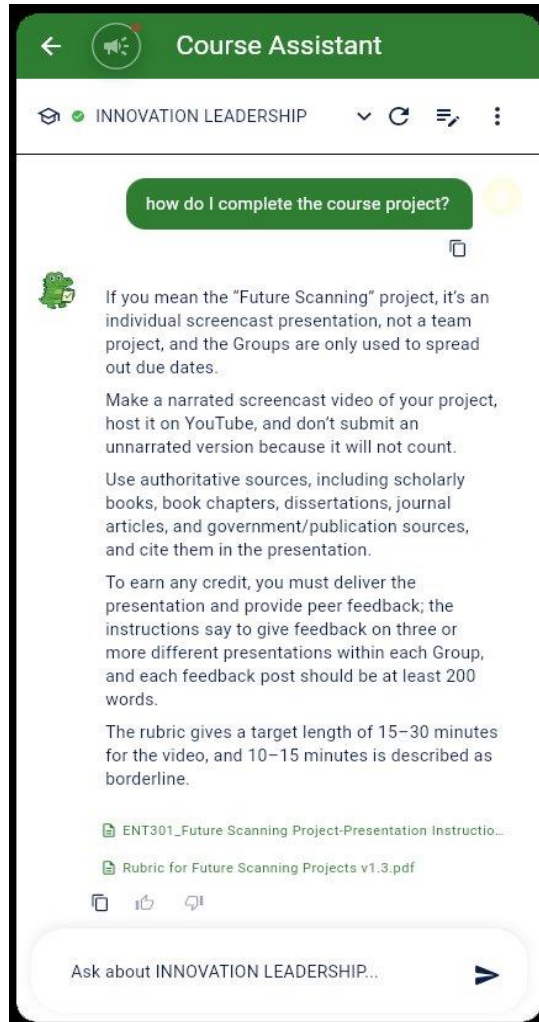
**Canvas gives professors flexibility.**

**Students get no tool to navigate it.**

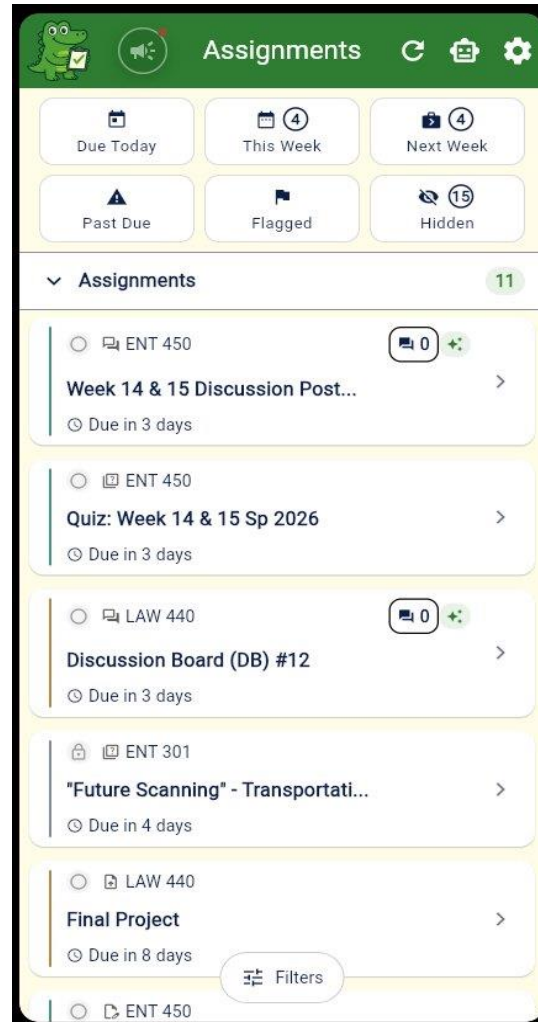
**One professor puts instructions in the assignment.  
Another uses a module page. A third links a PDF rubric.  
Every course is different.**

Students spend more time searching for information  
than using it.

# Stop searching. Start learning.



**AI Course Assistant**



**Unified Dashboard**

**Ask any question about your courses.**

Get answers with cited sources linking back to the original Canvas material.

**All assignments in one view.**

Priority-sorted across all courses. Filterable by due date, course, and status.

**Does NOT do student work.**

Finds information. Never generates it. Works with professors, not around them.

**Installs in seconds. Saves you hours.**



# Live Demo

TaskGator AI Course Assistant in action

*[Switch to Canvas + TaskGator screen share]*

# Why This Is Hard to Replicate

1

## Content Discovery

BFS graph traversal across all Canvas content types. Processes linked PDFs, Word docs, images via OCR.

2

## AI Accuracy

RAG + context stuffing. 100+ hours of tuning. 95%+ accuracy with source citations. Drops answers it can't cite.

3

## Proactive Intelligence

Change Radar detects silent edits. TL;DR Brief synthesizes requirements. Both depend on layers 1 and 2.

*First to market AI solution that finds hidden documents, processes PDFs & legacy Office documents via OCR, cites every source, and answers complex questions.*

# Market Opportunity

**\$15.3B**

US Educational  
Software Market

*IBISWorld, 2025*

**\$8.6B**

LMS Segment  
(56.2% of market)

*IBISWorld, 2025*

**43%**

Canvas Institution  
Share (North America)

*Hill/On EdTech, 2025*

~7,000 institutional customers | 100+ countries | 50% of North American higher-ed enrollment

*Instructure 10-K (FY2021); Hill/On EdTech Year-End 2024*

# Business Model

## Freemium Model

**Free:** Assignment dashboard + basic features

**Premium:** \$4.99/mo or \$39.99/yr

AI Course Assistant, Change Radar, TL;DR Brief

**Total investment to date:** \$6,341

Monthly run rate: ~\$370

**Live on Chrome Web Store today**

## Conservative Projections

	Yr 1	Yr 2	Yr 3
Penetration	0.1%	0.4%	1.0%
Paying users	588	3,136	9,800
<b>Revenue</b>	<b>\$35K</b>	<b>\$188K</b>	<b>\$587K</b>

*Organic growth only. No paid marketing. Breakeven Year 1.*

“ “TaskGator has changed the game for me this semester.” — Active pilot user

# What's Next

MAY '26

Change Radar — Detects silent updates to course content and surfaces them on your Canvas dashboard and course home pages

JUN '26

TL;DR Brief — Synthesizes instructions, rubrics, and linked documents into a clear summary, embedded right on each assignment page

NEXT

Multi-LMS expansion via LTI 1.3  
Blackboard, Moodle, D2L Brightspace

LONG

Institutional licensing: campus-wide deployment at volume pricing  
Acquisition path: cross-content AI engine has standalone value to LMS providers

# TaskGator is not a concept.

It's a working product pilot,

live on the Chrome Web Store,

being used by real students.

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Thank you.



Drumroll Please....

**And the Winners Are..**





pdma

Connecting Innovators Worldwide

# 2026 PDMA Carolinas Student Competition Winning Teams



**Product name:** Task Gator  
**Faculty advisor:** Dr. Lane Perry



**PDMA**

0001

PAY TO THE ORDER OF Tony Stone

\$ **500**

**Five Hundred Dollars**

DOLLARS

: 123456789 : 000123456789 : 0001

*PDMA*

SIGNATURE

pdma

Connecting Innovators Worldwide

# 2023 PDMA Carolinas Student Competition Winning Teams



**Product name:** Crystal-XG  
**Faculty advisor:** Colin McMillen



**PDMA**

0001

PAY TO THE  
ORDER OF

Lukas Garcia, David Floyd

\$

1000

**One Thousand Dollars**

DOLLARS

: 123456789 : 000123456789 : 0001

*PDMA*

SIGNATURE



# 2026 PDMA Carolinas Student Competition Winning Teams

**NC STATE UNIVERSITY**

**Product name: Kiku**

**Faculty advisor: Kenneth Proseus**



<b>PDMA</b>	0001
PAY TO THE ORDER OF <u>Zander Modares-Razavi</u>	\$ <b>2,000</b>
<b>Two Thousand Dollars</b>	DOLLARS
: 123456789 : 000123456789 : 0001	<i>PDMA</i> SIGNATURE



Connecting Innovators Worldwide

# 2024 PDMA Carolinas Student Competition Showcase

## **Thank you**

- **PDMA Carolinas** for their financial support
- **Students** for the innovative products
- **Faculty** for the guidance
- **Judges** for providing professional expertise
- **Audiences** for the encouragement