

# Navya Network: ROI Analysis Tool Development

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## Navya Cancer Data Model (NCDM)

Navya Cancer Data Model (NCDM) provided by Navya Network, Inc. leverages Artificial Intelligence and Machine Learning to automate and streamline workflows for the oncologists.



The NCDM summarizes hundreds of pages of unstructured patient data and medical records into a 2-page actionable "Case Summary", so that Oncologists could save up to 90% of time to complete a record review and render an opinion in 4.8 minutes.

## NCDM Data Workflow



## Host Company: Navya Network, Inc.

Founded in 2010 in Cambridge, MA, Navya Network, Inc. targets to improve clinical and informatics practice in cancer oncology and treatments.

### Host Contacts:



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## Project Description

Since the NCDM solution is not directly reimbursable from payers, it is integral that Navya illustrate the economic value and financial impact to healthcare providers in their business development process. The MIT student team aims to develop a ROI Calculator that allows Navya to quantify and explain the values of the NCDM platform to relevant stakeholders, including C-level of hospitals, oncologists, payers, etc.

Our major methodologies include secondary research, comparable research, and expert interviews.

## Project Outcome: ROI Calculator

**Inputs:** the calculator requires inputs of key hospital features and information from the calculator users (i.e., prospect customer of NCDM). Dummy numbers are put as an example based on MIT team's market research and interviews.

**Outputs:** the calculator produces an ROI analysis report that displays the investment costs and economic benefits identified for oncology customers of using NCDM.

Key Inputs		Key Outputs	
<b>Number of cases</b>		<b>Investment cost</b>	<b>\$579,400</b>
Total number of cases (per day)	15	Core Platform	\$525,000
Days of operations	350	Module 1	\$14,400
<b>Total number of cases (per year)</b>	<b>5,250</b>	Module 2	\$10,000
<b>Users</b>		Module 3	\$10,000
Number of Oncologists/ NP using the NCDM	7	Module 4	\$10,000
Number of Admins (for Module 1)	1	Module 5	\$10,000
<b>Average time savings (reviewing documents and others )</b>	<b>60</b>	<b>Returns</b>	
Average time to review a patient document (minutes)	60	<b>Times saved by users</b>	
NCDM - average time to review (minutes)	4.8	Each professional (min)	41,400
<b>Average time savings using NCDM (minutes per case)</b>	<b>55.2</b>	Each professional (hours)	690
<b>Hours (hours of work by Oncologists)</b>		Each professional (days)	29
Average hours of work per day	10	<b>Additional Revenue</b>	<b>\$2,748,842</b>
Operation breakdown (%)	TRUE	<b>Additional Recruiting Savings</b>	<b>\$102,000</b>
Clinical	60%	<b>Additional Research</b>	<b>8</b>
Research	20%	<b>Return on Investment</b>	<b>456%</b>
Admin	20%		
<b>Time savings allocation</b>	TRUE		
Clinical	10%	<b>Hours worked per Oncologist per year</b>	<b>Before NCDM</b> <b>After NCDM</b>
Research	30%	Clinical	1358    1419
Admin	30%	(Review)	750    50
Rest	30%	Research	700    907
		Admin	700    907
		Rest	0    207
<b>Annual investment on Recruiting</b>		Total (per per year)	3,500    3,500
Number of new Oncologists hired per year	2		
Recruiting cost per Oncologist	\$50,000		
<b>Platform purchase options</b>			
Core platform	By Seat		
Module 1	On		
Module 2	On		
Module 3	On		
Module 4	On		
Module 5	On		

\* Return on investment is calculated by (Revenue + Savings) / Investment cost

\*\* Note: The core platform is required to purchase Modules 1, 2, 3 and 5.

\*\* Note: Module 4 can be purchased as a standalone service.

## Benefits of the NCDM

Through our market research and interviews, three major advantages for healthcare providers of using the NCDM tool are identified and quantified in the ROI Calculator:

- Top-line revenue growth** generated by reviewing and treating more patients in less time
- Recruiting expenses saved** by giving back leisure and improving oncologist retention rate
- Additional paper published** by spending more time in research and experiments

### From our interviewees:

*" Instead of trying to get doctors to see 1 additional patient per day, I think it will be helpful to keep 5 more doctors from quitting this year. "*

- CMIO, Moffitt Cancer Center

*" Regarding oncologist's time allocation: this would be appropriate for the right hospitals - not us since we are not research focused clinics. "*

- CMIO, BayCare

## Use Case of the Calculator



Drive interested parties to the Navya website and allow for potential prospects to convert as leads on the website



Quantify savings and additional revenue generated by Navya for clients, increasing the prospect's desire to entering a tech acquisition



Periodic customer success contacts will be made to ensure the solution is being utilized properly and bringing value