TRAFFIC AND CAPACITY ANALYTICS FOR MAJOR PORTS

TEAM ID: PNT2022TMID18318

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SALEM-636005

1.INTRODUCTION

Ports serves as an important link in global supply chain. The Indian Railways has a capital base of about Rs.100000 crores and is often referred to as the lifeline of the Indian economy because of its predominance in transportation of bulk freight and long distance passenger traffic. Data analytics can be used for analysing the port performance. In this project, the port capacity topic was addressed through Cognos analysis. Reducing the congestion on rail corridors and improving port connectivity. Railways have also stepped-up developmental efforts and are preparing themselves for an even bigger role in the future. So, data analytics plays the major role in this project

1.1 Project Overview

The main intention of the performance of 13 major ports of India in respect of key operational performance indicators. Following rapid economic growth India's share in international trade is escalating. This puts increased pressure on these ports, which handle a substantial portion of the trade to perform with optimal efficiency. The study presents a systematic analysis of different performance indicators for a ten-year time period (2003 to 2013) using a variety of statistical methods and evaluates status of each port in different categories of performance. This will enable the ports to gauge their own effectiveness and appraise reasons for their shortcomings. In this context, the work further develops an integrated composite performance index by relegating comparative weightages to different indicators, to

assess the relative overall performance of different ports. The study underlines the need of such estimates to adjudge the consistency of performance, internal and across ports to enable planning and development of measures for enhanced

1.2 Purpose

Traffic Handling Capacity of Major Ports. The Infrastructural development and capacity augmentation of Major Ports is a continual process. The process inter-alia includes mechanization of the Ports by way of use of latest version of crane and other equipments/techniques for quicker turnaround of cargo. Implementation of some of the new initiatives suggested by benchmarking consultants had a positive impact in this regard. Keeping in view the recent initiatives taken like new Berthing Policy, 2016, Stevedoring Policy, Project Unnati, an exercise was taken to re-rate the capacities of Major Ports. This has resulted in the installed capacity of the Major Ports going up from 1065.83MTPA during 2016-17 to 1359MTPA

2.LITERATURE SUREVEY

A systematic Analysis of Port Capacity Literature: Trends and Future Research Avenues Publication year:31 January ,2021 Author name: Secil-Guelmez Journal name: Journal of maritime transport & logistics Summary: The continuous growth in the world economy, technology, and the population still shapes the industrialization patterns. This massive progress has also shaped the international transportation requirements. Ports, as the one of the important infrastructure in international transportation and supply chains, have been pushed by these changes in terms of structuring their capacitiesto satisfy the demand. To do this, this study adopted a systematic literature review and content analysis together. The result of this study showed that the most attractive topics are service level and performance in main category.

2.1 Existing problems

The port performance has frequently been studied in the academic literature, and the first studies on the subject are focused on financial or operational dimensions. However, today, port performance has become multi-dimensional due to the changing roles of the ports to its stakeholders, and the fact that local competition has been replaced by global competition through continuously developing routes, etc. Within this study, it is aimed to determine each dimension of the port performance concept which had been handled as a multi- dimensional process in recent years in literature. So, the concept of port performance had been divided into four

basic dimensions which are operational, financial, sustainable, and logistics.

2.2 References

https://indianrailways.gov.in/railwayboard/uploads/directorate/infra/downloads/Executive%20Summary%20of%20the%20Working%20Group%20for%20the%20XIth%20five%20year%20Plan.pdf

https://en.wikipedia.org/wiki/Traffic_analysis#References

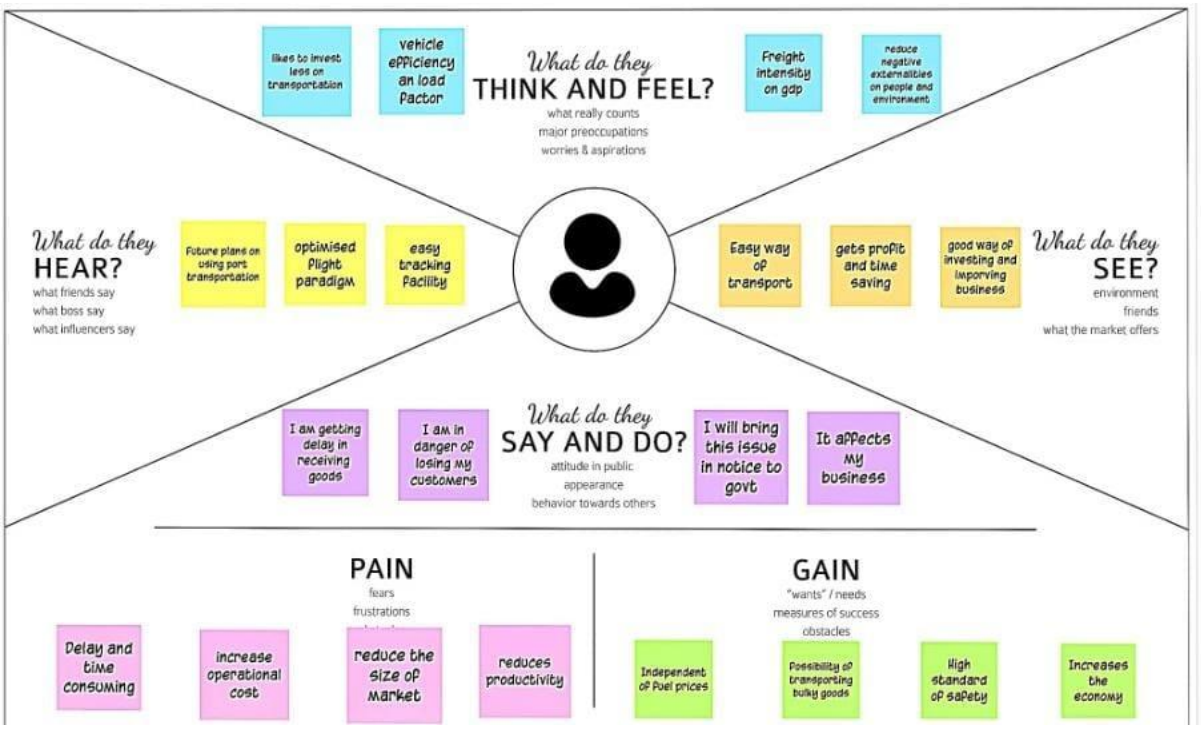
2.3 Problem Statement

Definition The impact of port congestion is far reaching and affects all industries resulting in slowdown in business, lack of inventory in stores, customers having to airfreight certain essential goods to alleviate shortages, especially of the consumer goods. Seasonal goods may not arrive in time

3.IDEATION & PROPOSED SOLUTION

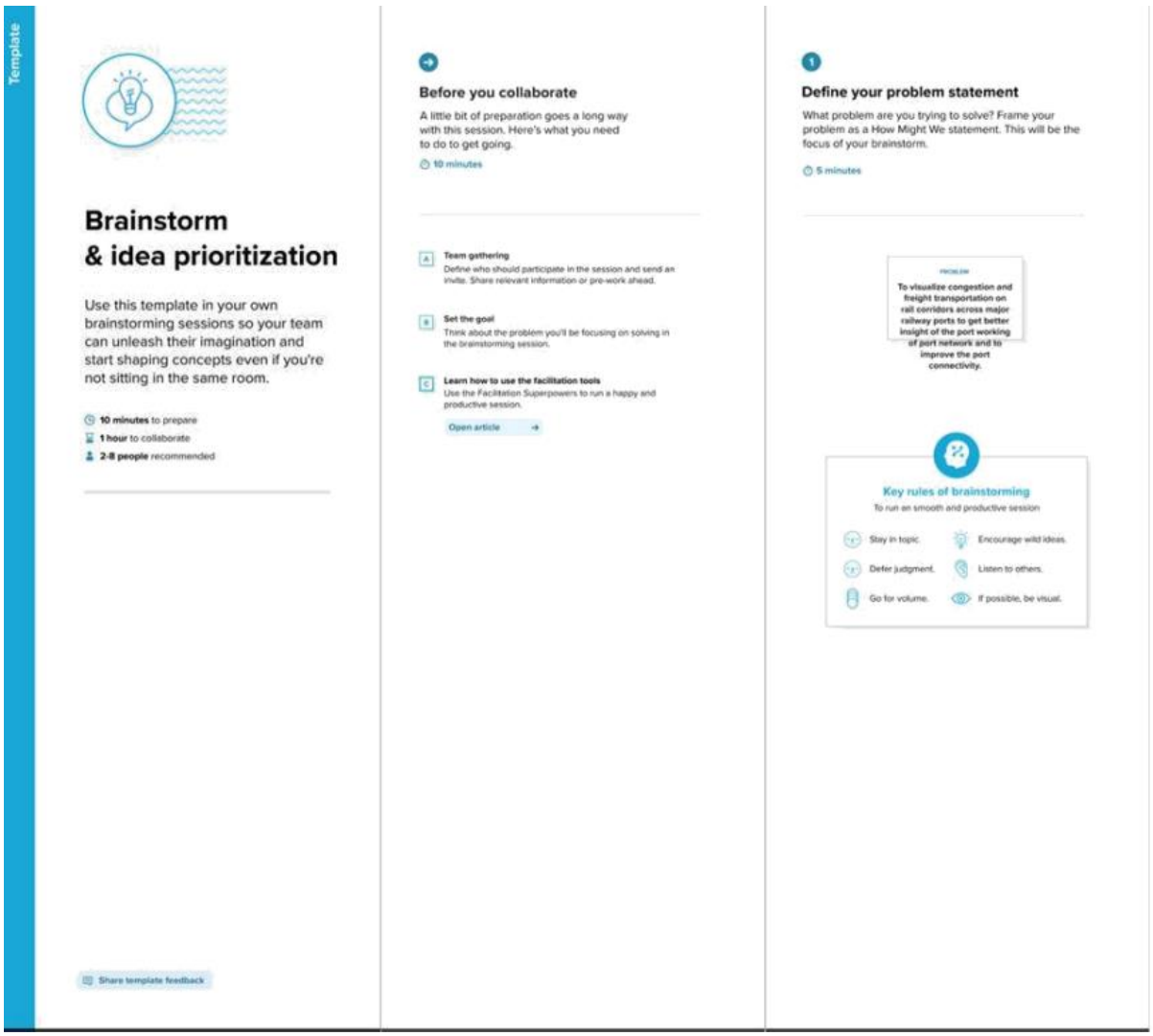
3.1Empathy Map

Canvas An empathy map is a simple, easy-to-digest visual that captures knowledge about a user's behaviours and attitudes. It is a useful tool to helps teams better understand their users. Creating an effective solution requires understanding the true problem and the person who is experiencing it. The exercise of creating the map helps participants consider things from the user's perspective along with their her goals and challenges

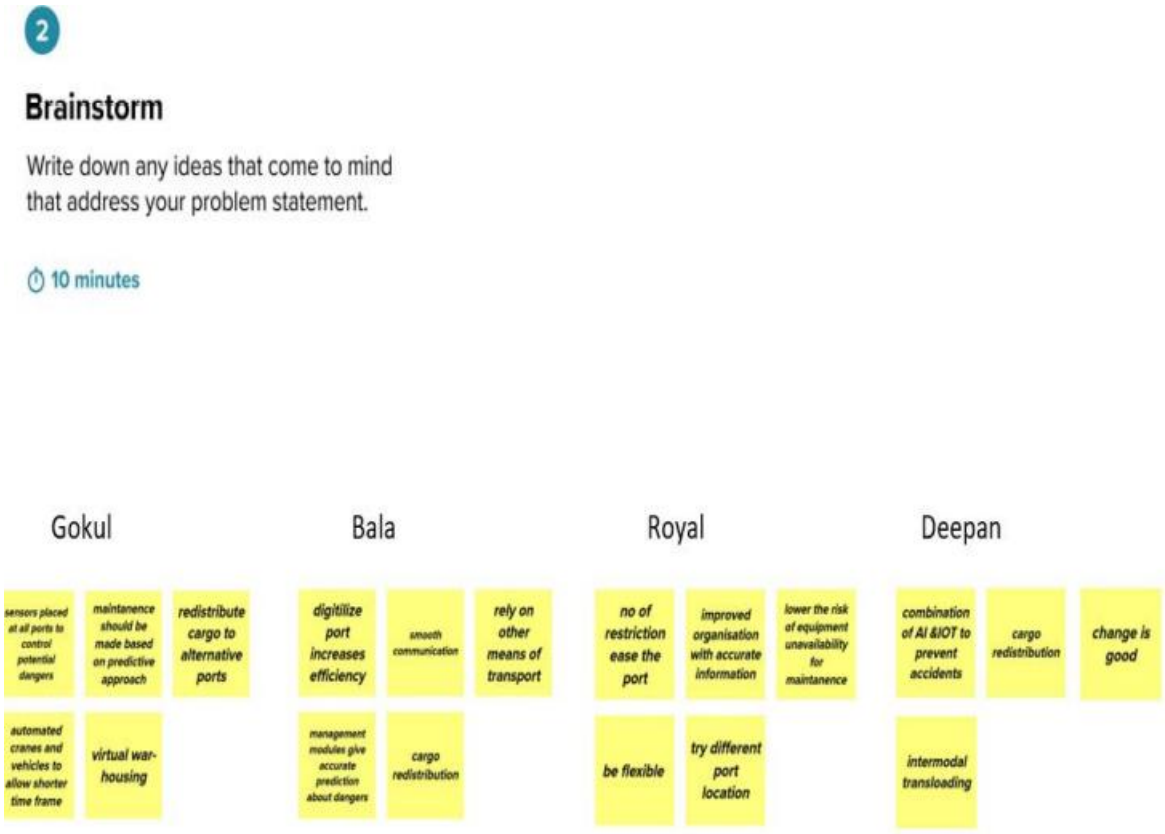


3.2 Ideation & Brainstorming

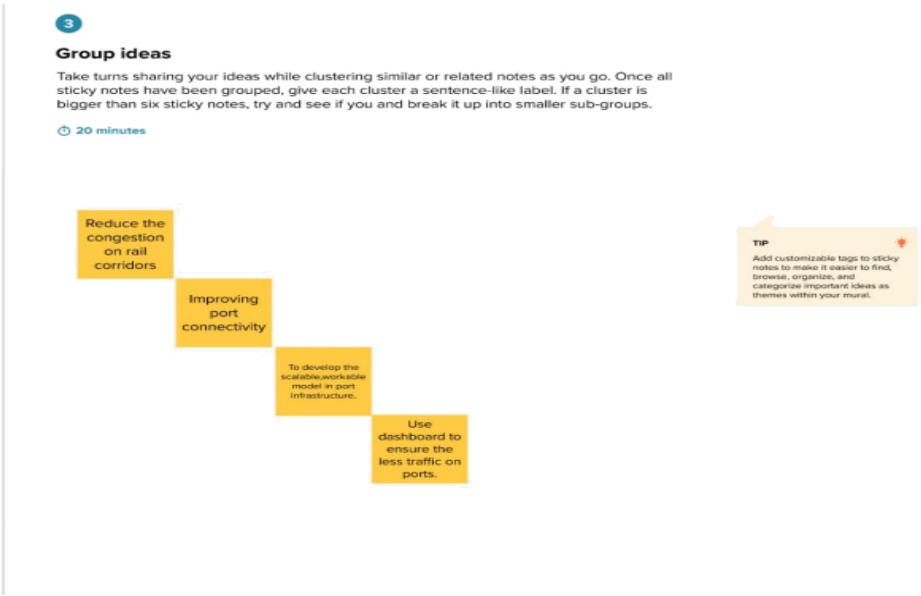
Step-1: Team Gathering, Collaboration and Select the Problem Statement



Step-2: Brainstorm, Idea Listing and Grouping



Step-3: Group Ideas



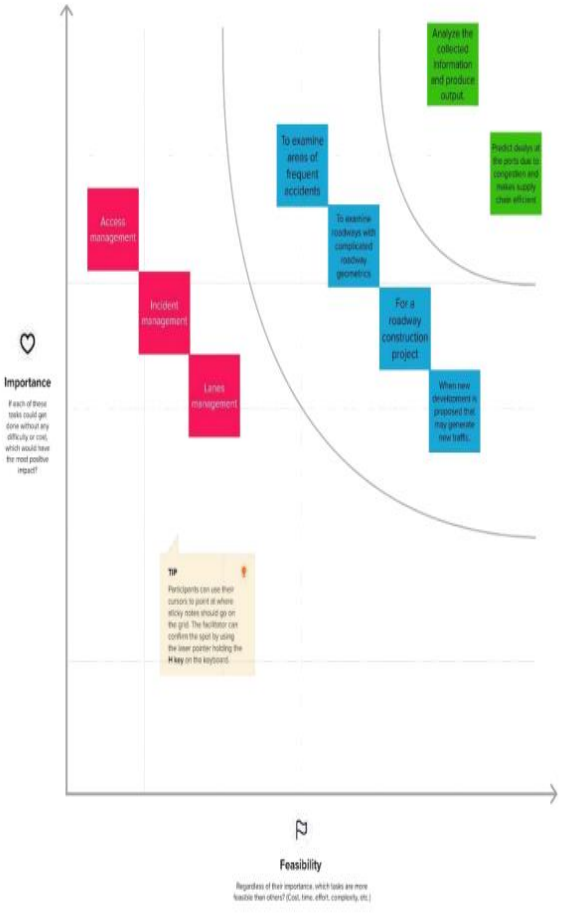
Step-4 Prioritization

4

Prioritize

Your team should all be on the same page about what's important moving forward. Place your ideas on this grid to determine which ideas are important and which are feasible.

20 minutes



After you collaborate

You can export the mural as an image or pdf to share with members of your company who might find it helpful.

Quick add-ons

A **Share the mural**
Share a view link to the mural with stakeholders to keep them in the loop about the outcomes of the session.

B **Export the mural**
Export a copy of the mural as a PNG or PDF to attach to emails, include in slides, or save in your drive.

Keep moving forward

Strategy blueprint
Define the components of a new idea or strategy.
Open the template →

Customer experience journey map
Understand customer needs, motivations, and obstacles for an experience.
Open the template →

Strengths, weaknesses, opportunities & threats
Identify strengths, weaknesses, opportunities, and threats (SWOT) to develop a plan.
Open the template →

Share template feedback

3.3Proposed Solutions

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Port capacity is a relevant parameter to estimate the expected performance of a port facility. Many simulation models have been used to predict traffic in ports and waterways, but they do not include provisions for estimating the port's capacity. The innovative method presented here determines a Port Network Traffic Capacity(PNTC) based on simulation. This method estimates PNTC giventhe configuration and processing characteristics of the port. It can be a useful tool to apply while designing ports, because only a limited number of simulations are required to estimate of the capacity of the infrastructure under consideration. Capacity Analysis represents a key piece of Traffic Impact Study-determining whether the roadways or intersections can handle the traffic. This part of our series presents an overview of the essential tasks in a capacity analysis
2.	Idea / Solution description	Automatic Identification System (AIS), has theability to track and analyze vessel behaviour within the marine domain was introduced. Nowadays, the ubiquitous availability of huge amounts of data presents challenges for systems aimed at using AIS data for analysis purposes regarding computability and how to extract valuable information from the data. This thesis covers the process of developing a system capable of performing AIS data analytics using state of the art Big data technologies, supporting key features from a system called Marine Traffic Analyzer 3. The results show that the developed system has improved performance, supports larger files and is accessible by more users at the same

		time. To build a python application using python notebook by importing the AIS data and classifying the voyages to determine port traffic. This project explores the possibility of detecting identity fraud by using clustering techniques for extracting voyages of vessels using movement patterns and presents a prototype algorithm for doing so. The results concerning the validation show some merits, but also exposes weaknesses such as time consuming tuning of parameters.
3.	Novelty / Uniqueness	▪ Data Analytics ▪ Predicting port traffic by importin and analyzing the datasets
4.	Social Impact / Customer Satisfaction	• Employment (including labour market standards and rights) • Income • Access to services (including education, socialservices, etc.) • Respect for fundamental rights (including equality) • Public health and safety.
5.	Business Model (Revenue Model)	AIS message validationK-means clustering
6.	Scalability of the Solution	Automatic Identification System (AIS) transponders broadcast information about position, course, speed and its navigational status. Originally, the purpose was solely collision avoidance

3.3 Problem Solution Fit

4. REQUIREMENT ANALYSIS

4.1 FUNCTIONAL REQUIREMENTS:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	Registration through Form Registration through Gmail
FR-2	User Confirmation	Confirmation via Email
FR-3	User Input Acceptance	The dashboard accepts user input by means of selecting the location of the ports.
FR-4	Options for User to filter location of ports	The user can use filter options to view ports by countries.
FR-5	Visualization of ports.	The dashboard provides various visualization techniques to understand the flow.
FR-6	Providing Delay Information of trains.	The dashboard is able to provide the user the information like delay of a particular train to the ports.

4.2 Non-functional Requirements:

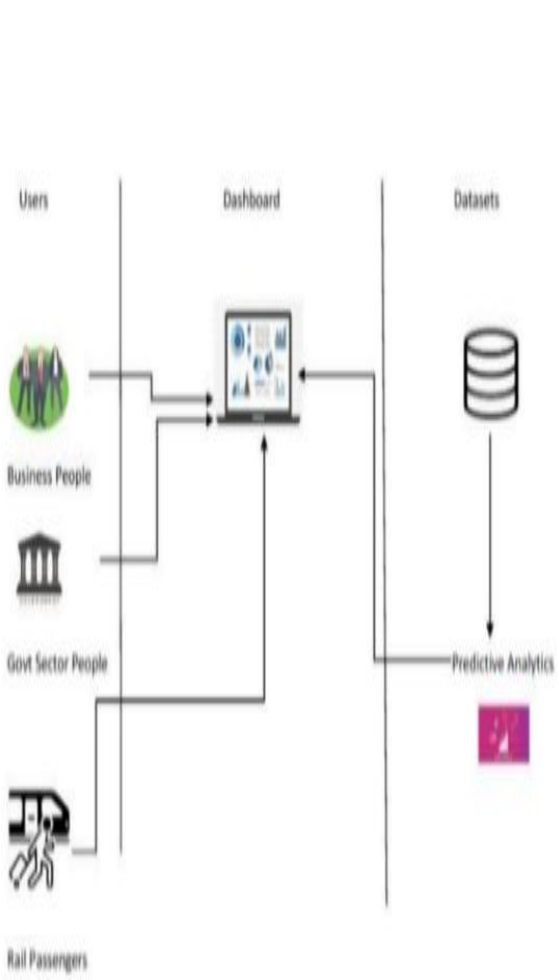
Following are the non-functional requirements of the proposed solution.

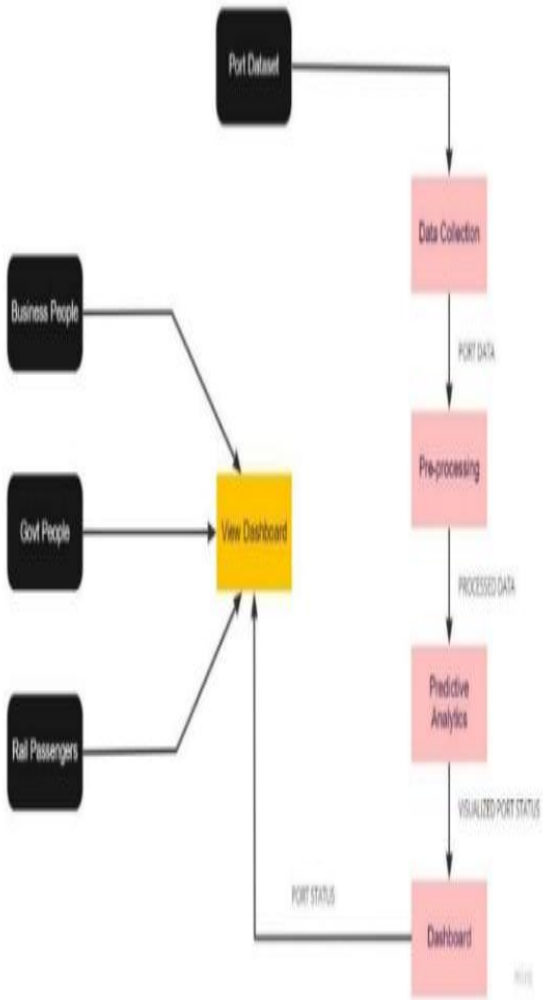
FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The dashboard is able to provide the users the consistency and the aesthetic they expect. The user can constantly use the dashboard without any flaw in the visual quality.
NFR-2	**Security**	The dashboard is much secured that the data of the users are kept confidential and also it is not prone to any kind of attacks.
NFR-3	**Reliability**	The failure rate is minimal and the failure can easily be rectified using the measures. Thus this makes the dashboard much reliable.
NFR-4	**Performance**	The dashboard gives better performance. It provides the user a convenient and flexible User Interface.
NFR-5	**Availability**	The dashboard is always available to serve the users. The availability is ensured in such a way that the user can access the dashboard any time anywhere.
NFR-6	**Scalability**	The dashboard is highly scalable. It can withstand any increase or decrease of loads.

5. PROJECT DESIGN

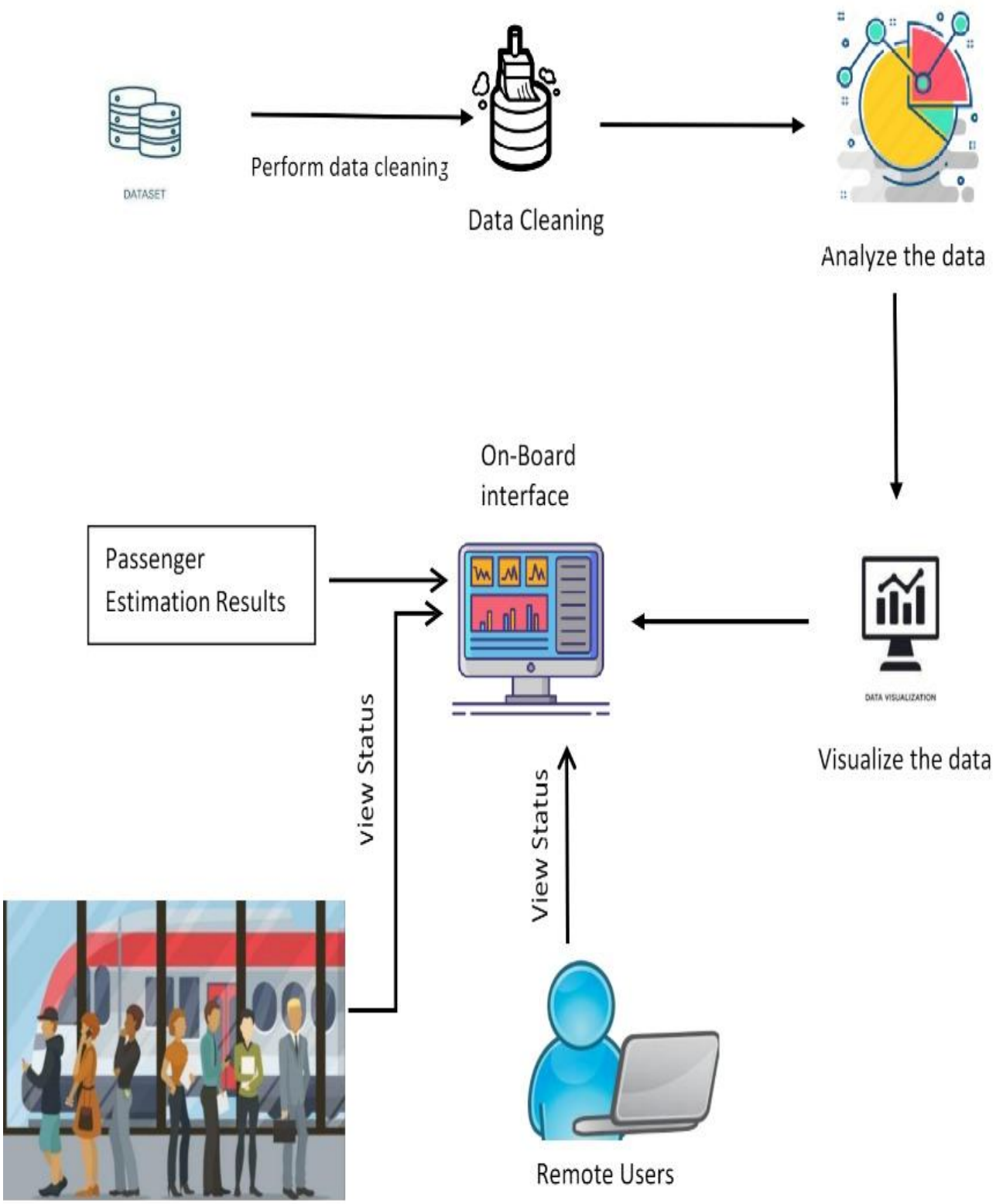
5.1Data Flow Diagram:

Data Flow Diagrams: A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information.





5.2 SOLUTION &TECHNICAL ARCHITECTURE



5.3USER STORIES

Use the below template to list all the user stories for the product

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Business People	Monitoring	USN-1	As a user, I can view the dashboard to see the port status.	I can visualize the port status in dashboard.	High	Sprint-1
	Tracking	USN-2	As a user, I can track the goods.	I can track the goods by its arrival/departure time.	High	Sprint-1
Govt Sector People	Viewing	USN-1	As a user, I can view the port status regularly.	I can able to know the port status.	Low	Sprint-2
	Predicting	USN-2	As a user, I will reduce the congestion ports by predicting the port congestion through dashboard.	I can able to predict the congestion in future.	High	Sprint-2
Passengers	Tracing	USN-1	As a user, I can trace the arrival/departure time of rail in ports.	I can able to track the correct time of rail.	High	Sprint-2

6.PROJECT PLANNING AND SCHEDULING

6.1 SPRINT PLANNING & ESTIMATION

Sprint	Functional Requirement(epic)	User story number	User Story/Task	Story priority points	Team members
Sprint-1	Application	USN-1	All the modules and futures are planned which going to the implemented.	High	Gokul Krishnan T CH.Bala Venkata Krishna Reddy Deepan Chandar R Arla Venkat Royal
Sprint-1		USN-2	The modules like long in page and dashboard are going to be resigned.	High	Gokul Krishnan T CH.Bala Venkata Krishna Reddy Deepan Chandar R Arla Venkat Royal
Sprint-2		USN-3	The prediator is going to be developed which analysis be previous data set.	Medium	Gokul Krishnan T CH.Bala Venkata Krishna Reddy Deepan Chandar R Arla Venkat Royal

6.2 Sprint Delivery Schedule:

Sprint	Total story points	Duration	Sprint start Date	Sprint end date	Story points completed	Sprint Release
Sprint-1	20	5 Days	1 Nov 2022	05 Nov 2022	20	05 Nov 2022
Sprint-2	20	5 Days	06 Nov 2022	10 Nov 2022	20	10 Nov 2022
Sprint-3	20	5 Days	11 Nov 2022	15 Nov 2022	20	15 Nov 2022
Sprint-4	20	5 Days	16 Nov 2022	20 Nov 2022	20	20 Nov 2022

6.3 REPORT FROM JIRA

VELOCITY: SPRINT - 1

Sprint duration = 5 days

Velocity of team = 20 points

Average Velocity (AV) = Velocity/ Sprint duration

AV = 20/5 = 4

Average Velocity=4

VELOCITY: Sprint 1 – 4

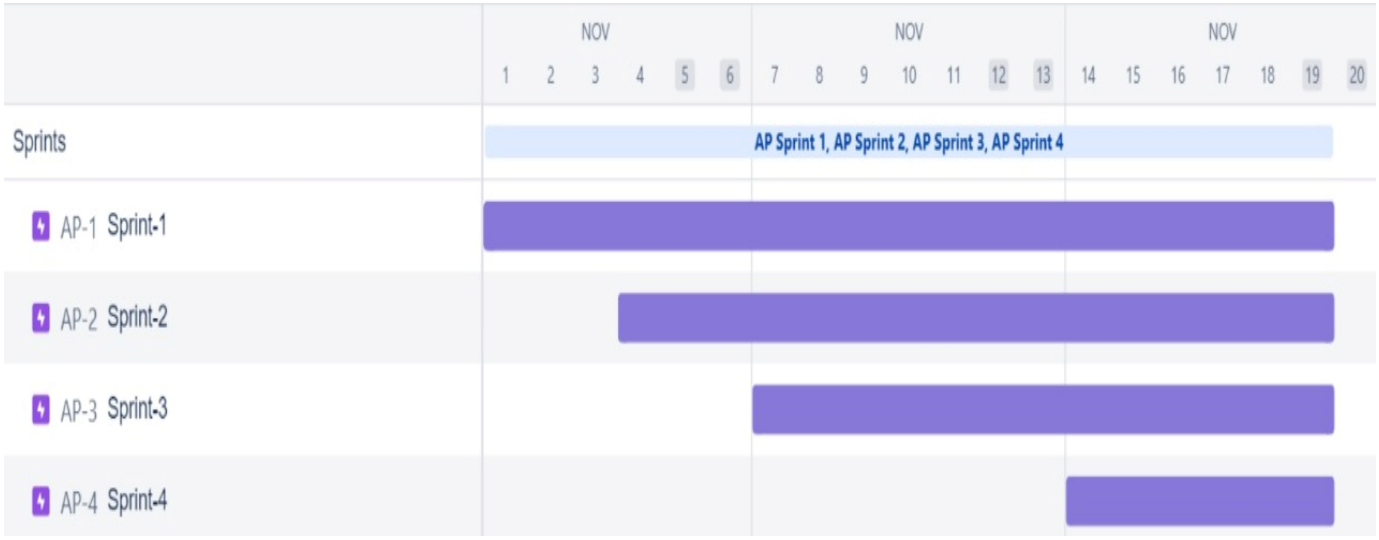
Sprint duration = 20 days

Velocity of team = 80 points

Average Velocity (AV) = Velocity/ Sprint duration

AV = 80/20 = 4

Total Average Velocity=4



7.CODING & SOLUTIONING

```
In [ ]: !pip install -q kaggle

In [ ]: !mkdir ~/.kaggle #creating a kaggle directory

In [ ]: !cp kaggle.json ~/.kaggle/ # copying json file to folder

In [ ]: !kaggle datasets download -d gokulkrishnant/port-traffic

Warning: Your Kaggle API key is readable by other users on this system! To fix this, you can run 'chmod 600 /root/.kaggle/kaggle.json'
Downloading port-traffic.zip to /content
  0% 0.00/564 [00:00, ?B/s]
100% 564/564 [00:00<00:00, 327kB/s]

In [ ]: !unzip /content/port-traffic.zip

Archive:  /content/port-traffic.zip
  inflating: port traffic data prep.csv

In [ ]:
```

7.1 Feature 1

about.html

```
C: > Users > ARLA VENKAT ROYAL > Downloads > IBM > IBM PROJECT > about.html > html > body > main#main > div.breadcrumbs
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="utf-8">
  <meta content="width=device-width, initial-scale=1.0" name="viewport">

  <title>Logis Bootstrap Template - About</title>
  <meta content="" name="description">
  <meta content="" name="keywords">


  <link href="assets/img/favicon.png" rel="icon">
  <link href="assets/img/apple-touch-icon.png" rel="apple-touch-icon">


  <link rel="preconnect" href="https://fonts.googleapis.com">
  <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin>
  <link href="https://fonts.googleapis.com/css2?family=Open+Sans:ital,wght@0,300;0,400;0,500;0,600;0,700;1,300;1,400;1,600;1,700&family=P

  <link href="assets/vendor/bootstrap/css/bootstrap.min.css" rel="stylesheet">
  <link href="assets/vendor/bootstrap-icons/bootstrap-icons.css" rel="stylesheet">
  <link href="assets/vendor/fontawesome-free/css/all.min.css" rel="stylesheet">
  <link href="assets/vendor/glightbox/css/glightbox.min.css" rel="stylesheet">
  <link href="assets/vendor/swiper/swiper-bundle.min.css" rel="stylesheet">
  <link href="assets/vendor/aos/aos.css" rel="stylesheet">

  <link href="assets/css/main.css" rel="stylesheet">

</head>

<body>


  <header id="header" class="header d-flex align-items-center fixed-top">
    <div class="container-fluid container-xl d-flex align-items-center justify-content-between">
```

```
      <a href="index.html" class="logo d-flex align-items-center">

        <h1>Logis</h1>
      </a>

      <i class="mobile-nav-toggle mobile-nav-show bi bi-list"></i>
      <i class="mobile-nav-toggle mobile-nav-hide d-none bi bi-x"></i>
      <nav id="navbar" class="navbar">
        <ul>
         <li><a href="index.html" class="active">Home</a></li>
         <li><a href="about.html">About</a></li>
         <li class="dropdown"><a href="#"><span>IBM Cognos Analytics</span> <i class="bi bi-chevron-down dropdown-indicator"></i></a>
           <ul>
             <li><a href="dashboards.html">Dashboards</a></li>

             <li><a href="story.html">Story</a></li>
             <li><a href="report.html">Report</a></li>
           </ul>
         </li>
         <li><a class="get-a-quote" href="login/logout.php">Logout</a></li>
        </ul>      </nav>

    </div>
  </header>

  <main id="main">

    <div class="breadcrumbs">
      <div class="page-header d-flex align-items-center" style="background-image: url('assets/img/page-header.jpg');">
        <div class="container position-relative">
          <div class="row d-flex justify-content-center">
            <div class="col-lg-6 text-center">
              <h2>About</h2>
            </div>
          </div>
        </div>
      </div>
      </div>
      <nav>
        <div class="container">
          <ol>
            <li><a href="index.html">Home</a></li>
            <li>About</li>
          </ol>
        </div>
      </nav>
    </div>
    <section id="about" class="about">
      <div class="container" data-aos="fade-up">

        <div class="row gy-4">
          <div class="col-lg-6 position-relative align-self-start order-lg-last order-first">
            <img src="assets/img/about.jpg" class="img-fluid" alt="">
            <a href="https://www.youtube.com/watch?v=LXb3EKWsInQ" class="glightbox play-btn"></a>
          </div>
          <div class="col-lg-6 content order-last  order-lg-first">
            <h3>About Us</h3>
            <p>
              Ports serves as an important link in global supply chain. The Indian
Railways has a capital base of about Rs.100000 crores and is often referred
to as the lifeline of the Indian economy because of its predominance in
transportation of bulk freight and long distance passenger traffic. Data
analytics can be used for analyzing the port performance.
            </p>
            <p>
              In this project, the port capacity topic was addressed through Cognos analysis.
Reducing the congestion on rail corridors and improving portconnectivity.
Railways have also stepped-up developmental efforts and are preparing
themselves for an even bigger role in the future. So, data analytics plays the
major role in this project.</p>
            <ul>
              <li data-aos="fade-up" data-aos-delay="100">
                <i class="bi bi-diagram-3"></i>
```

```
                <i class="bi bi-diagram-3"></i>
                <div>
                  <h5>Port dataset</h5>
                  <p>Data Collection </p>
                </div>
              </li>
              <li data-aos="fade-up" data-aos-delay="200">
                <i class="bi bi-fullscreen-exit"></i>
                <div>
                  <h5>Preprocessing</h5>
                  <p>prepare the data set</p>
                </div>
              </li>
              <li data-aos="fade-up" data-aos-delay="300">
                <i class="bi bi-broadcast"></i>
                <div>
                  <h5>Dashboard Creation from IBM Cognos analytics</h5>
                  <p>View Dashboard, Stories, Report..</p>
                </div>
              </li>
            </ul>
          </div>
        </div>

      </div>
    </section><!-- End About Us Section -->

    <!-- ======= Stats Counter Section ======= -->
    <section id="stats-counter" class="stats-counter pt-0">
      <div class="container" data-aos="fade-up">

        <div class="row gy-4">

          <div class="col-lg-3 col-md-6">
            <div class="stats-item text-center w-100 h-100">
              <span data-purecounter-start="0" data-purecounter-end="4" data-purecounter-duration="1" class="purecounter"></span>
```

C: > Users > ARLA VENKAT ROYAL > Downloads > IBM > IBM PROJECT > about.html > html > body > main#main > section#about.about > div.container > div.row.gy-4

```
              <p>Team members</p>
            </div>
          </div><!-- End Stats Item -->

          <div class="col-lg-3 col-md-6">
            <div class="stats-item text-center w-100 h-100">
              <span data-purecounter-start="0" data-purecounter-end="13" data-purecounter-duration="1" class="purecounter"></span>
              <p>Weeks</p>
            </div>
          </div><!-- End Stats Item -->

          <div class="col-lg-3 col-md-6">
            <div class="stats-item text-center w-100 h-100">
              <span data-purecounter-start="0" data-purecounter-end="137" data-purecounter-duration="1" class="purecounter"></span>
              <p>Hours Of work </p>
            </div>
          </div><!-- End Stats Item -->

          <div class="col-lg-3 col-md-6">
            <div class="stats-item text-center w-100 h-100">
              <span data="Completed" data-purecounter-duration="1" class="purecounter"></span>
              <p>Status</p>
            </div>
          </div><!-- End Stats Item -->

        </div>

      </div>
    </section><!-- End Stats Counter Section -->

    <!-- Team member info-->
    <center>
      <h2> Team members</h2>
        </center>
```

C: > Users > ARLA VENKAT ROYAL > Downloads > IBM > IBM PROJECT > about.html > html > body > main#main

```
      <ul>
                        <li data-aos="fade-up" data-aos-delay="100">
<h4>Gokul Krishnan T</h4></li>
                        <li data-aos="fade-up" data-aos-delay="100">
<h4>Deepan Chandar R</h4></li>
                        <li data-aos="fade-up" data-aos-delay="100">
<h4>Bala</h4></li>
                        <li data-aos="fade-up" data-aos-delay="100">
<h4>Arla venkat Royal</h4></li>



      </ul>









          </div>

        </div>
       </div>

      </div>
    </section>

  </main>
  <footer id="footer" class="footer">

    <div class="container">
      <div class="row gy-4">
        <div class="col-lg-5 col-md-12 footer-info">
          <a href="index.html" class="logo d-flex align-items-center">
          </a>
```

C: > Users > ARLA VENKAT ROYAL > Downloads > IBM > IBM PROJECT > about.html > html > body > main#main

```
          <div class="social-links d-flex mt-4">
            <a href="#" class="twitter"><i class="bi bi-twitter"></i></a>
            <a href="#" class="facebook"><i class="bi bi-facebook"></i></a>
            <a href="#" class="instagram"><i class="bi bi-instagram"></i></a>
            <a href="#" class="linkedin"><i class="bi bi-linkedin"></i></a>
          </div>
        </div>

        <div class="col-lg-2 col-6 footer-links">

        </div>

        <div class="col-lg-2 col-6 footer-links">

        </div>

        <div class="col-lg-3 col-md-12 footer-contact text-center text-md-start">
          <h4>Contact Us</h4>
          <p>
            Sona College of Technology <br>
            Salem, TN<br>
            India <br><br>
            <strong>Phone:</strong> 8015355385<br>
            <strong>Email:</strong> gokulkrishnant99@gmail.com<br>
          </p>

        </div>

      </div>
    </div>

    <div class="container mt-4">
      <div class="copyright">
        &copy; Copyright <strong><span>Logis</span></strong>. All Rights Reserved
      </div>
```

```
      </div>
      <div class="credits">
      </div>
    </div>

  </footer>

  <a href="#" class="scroll-top d-flex align-items-center justify-content-center"><i class="bi bi-arrow-up-short"></i></a>

  <div id="preloader"></div>


  <script src="assets/vendor/bootstrap/js/bootstrap.bundle.min.js"></script>
  <script src="assets/vendor/purecounter/purecounter_vanilla.js"></script>
  <script src="assets/vendor/glightbox/js/glightbox.min.js"></script>
  <script src="assets/vendor/swiper/swiper-bundle.min.js"></script>
  <script src="assets/vendor/aos/aos.js"></script>
  <script src="assets/vendor/php-email-form/validate.js"></script>


  <script src="assets/js/main.js"></script>

</body>

</html>
```

Index.html

```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="utf-8">
  <meta content="width=device-width, initial-scale=1.0" name="viewport">

  <title>Port traffic analytics</title>
  <meta content="" name="description">
  <meta content="" name="keywords">

  <!-- Favicons -->
  <link href="assets/img/favicon.png" rel="icon">
  <link href="assets/img/apple-touch-icon.png" rel="apple-touch-icon">

  <!-- Google Fonts -->
  <link rel="preconnect" href="https://fonts.googleapis.com">
  <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin>
  <link href="https://fonts.googleapis.com/css2?family=Open+Sans:ital,wght@0,300;0,400;0,500;0,600;0,700;1,300;1,400;1,600;1,700&family=

  <!-- Vendor CSS Files -->
  <link href="assets/vendor/bootstrap/css/bootstrap.min.css" rel="stylesheet">
  <link href="assets/vendor/bootstrap-icons/bootstrap-icons.css" rel="stylesheet">
  <link href="assets/vendor/fontawesome-free/css/all.min.css" rel="stylesheet">
  <link href="assets/vendor/glightbox/css/glightbox.min.css" rel="stylesheet">
  <link href="assets/vendor/swiper/swiper-bundle.min.css" rel="stylesheet">
  <link href="assets/vendor/aos/aos.css" rel="stylesheet">

  <!-- Template Main CSS File -->
  <link href="assets/css/main.css" rel="stylesheet">

  <!-- =======================================================
  * Template Name: Logis - v1.2.1
  * Template URL: https://bootstrapmade.com/logis-bootstrap-logistics-website-template/
  * Author: BootstrapMade.com
  * License: https://bootstrapmade.com/license/
```

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```
  </head>

  <body>

    <!-- ======= Header ======= -->
    <header id="header" class="header d-flex align-items-center fixed-top">
      <div class="container-fluid container-xl d-flex align-items-center justify-content-between">

        <a href="index.html" class="logo d-flex align-items-center">
          <!-- Uncomment the line below if you also wish to use an image logo -->
          <!-- <img src="assets/img/logo.png" alt=""> -->
          <h1>Logis</h1>
        </a>

        <i class="mobile-nav-toggle mobile-nav-show bi bi-list"></i>
        <i class="mobile-nav-toggle mobile-nav-hide d-none bi bi-x"></i>
        <nav id="navbar" class="navbar">
          <ul>
            <li><a href="index.html" class="active">Home</a></li>
            <li><a href="about.html">About</a></li>
            <li class="dropdown"><a href="#"><span>IBM Cognos Analytics</span> <i class="bi bi-chevron-down dropdown-indicator"></i></a>
              <ul>
                <li><a href="dashboards.html">Dashboards</a></li>

                <li><a href="story.html">Story</a></li>
                <li><a href="report.html">Report</a></li>
              </ul>
            </li>
            <li><a class="get-a-quote" href="login/logout.php">Logout</a></li>
          </ul>
        </nav><!-- .navbar -->

      </div>
    </header><!-- End Header -->
    <!-- End Header -->
```

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```
    <!-- ======= Hero Section ======= -->
    <section id="hero" class="hero d-flex align-items-center">
      <div class="container">
        <div class="row gy-4 d-flex justify-content-between">
          <div class="col-lg-6 order-2 order-lg-1 d-flex flex-column justify-content-center">
            <h2 data-aos="fade-up">Traffic and Capacity Analytics for Major Ports</h2>
            <p data-aos="fade-up" data-aos-delay="100">In this project, the port capacity topic was addressed through Cognos analysis.
Reducing the congestion on rail corridors and improving portconnectivity.
Railways have also stepped-up developmental efforts and are preparing
themselves for an even bigger role in the future. So, data analytics plays the
major role in this project.</p>



            <div class="row gy-4" data-aos="fade-up" data-aos-delay="400">

              <div class="col-lg-3 col-6">
                <div class="stats-item text-center w-100 h-100">

                </div>
              </div><!-- End Stats Item -->

              <div class="col-lg-3 col-6">
                <div class="stats-item text-center w-100 h-100">

                </div>
              </div><!-- End Stats Item -->

              <div class="col-lg-3 col-6">
                <div class="stats-item text-center w-100 h-100">

                </div>
              </div><!-- End Stats Item -->

              <div class="col-lg-3 col-6">
                <div class="stats-item text-center w-100 h-100">
```

```
            </div>
          </div><!-- End Stats Item -->

        </div>
      </div>

      <div class="col-lg-5 order-1 order-lg-2 hero-img" data-aos="zoom-out">
        <img src="assets/img/hero-img.svg" class="img-fluid mb-3 mb-lg-0" alt="">
      </div>

    </div>
  </div>
</section><!-- End Hero Section -->

<main id="main">

  <!-- ======= Featured Services Section ======= -->
  <section id="featured-services" class="featured-services">
    <div class="container">

      <div class="row gy-4">

        <div class="col-lg-4 col-md-6 service-item d-flex" data-aos="fade-up">
          <div>
          </div>
        </div>
        <!-- End Service Item -->

        <div class="col-lg-4 col-md-6 service-item d-flex" data-aos="fade-up" data-aos-delay="100">
          <div>

          </div>
        </div><!-- End Service Item -->

        <div class="col-lg-4 col-md-6 service-item d-flex" data-aos="fade-up" data-aos-delay="200">
```

```
          <div>

          </div>
        </div><!-- End Service Item -->

      </div>

    </div>
  </section><!-- End Featured Services Section -->

  <!-- ======= About Us Section ======= -->
  <section id="about" class="about pt-0">
    <div class="container" data-aos="fade-up">

      <div class="row gy-4">
        <div class="col-lg-6 position-relative align-self-start order-lg-last order-first">
          <img src="assets/img/about.jpg" class="img-fluid" alt="">
          <a href="https://www.youtube.com/watch?v=LXb3EKWsInQ" class="glightbox play-btn"></a>
        </div>
        <div class="col-lg-6 content order-last  order-lg-first">
          <h3>About Us</h3>
          <p>
1. Predictive analytics will be done from collected dataset and it will be updated in dashboard.
<br>

2. Business people can able to view the dashboard to track their goods.
<br>

3. Government sector people can able to predict the congestion in ports by viewing the dashboard and it helps to avoid congestion in future.<br>
4. Rail passengers can able to track the correct time of rail in ports.
          </p>
          <ul>
            <li data-aos="fade-up" data-aos-delay="100">
              <i class="bi bi-diagram-3"></i>
              <div>
```

```
                <h5>Port Data set from IBM DB2 to IBM Cognos Analytics</h5>
                <p>Data Collection</p>
              </div>
            </li>
            <li data-aos="fade-up" data-aos-delay="200">
              <i class="bi bi-fullscreen-exit"></i>
              <div>
                <h5>Data Preprocessing</h5>
                <p>Data Cleaning, Data preprocessing</p>
              </div>
            </li>
            <li data-aos="fade-up" data-aos-delay="300">
              <i class="bi bi-broadcast"></i>
              <div>
                <h5>Predictive Analytics</h5>
                <p>Creation of Dashboards, Story, Report... to analyse the traffic</p>
              </div>
            </li>
          </ul>
        </div>
      </div>

    </div>
  </section><!-- End About Us Section -->

  <!-- ======= Services Section ======= -->
  <section id="service" class="services pt-0">
    <div class="container" data-aos="fade-up">

      <div class="section-header">
        <span>Our Services</span>
        <h2>Our Services</h2>

      </div>

      <div class="row gy-4">
```

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```
      </div>

      <div class="row gy-4">

        <div class="col-lg-4 col-md-6" data-aos="fade-up" data-aos-delay="100">
          <div class="card">
            <div class="card-img">
              <img src="assets/img/storage-service.jpg" alt="" class="img-fluid">
            </div>
            <h3><a href="dashboards.html" class="stretched-link">Dashboards</a></h3>
            <p></p>
          </div>
        </div><!-- End Card Item -->

        <div class="col-lg-4 col-md-6" data-aos="fade-up" data-aos-delay="200">
          <div class="card">
            <div class="card-img">
              <img src="assets/img/logistics-service.jpg" alt="" class="img-fluid">
            </div>
            <h3><a href="story.html" class="stretched-link">Stories</a></h3>
            <p></p>
          </div>
        </div><!-- End Card Item -->

        <div class="col-lg-4 col-md-6" data-aos="fade-up" data-aos-delay="300">
          <div class="card">
            <div class="card-img">
              <img src="assets/img/cargo-service.jpg" alt="" class="img-fluid">
            </div>
            <h3><a href="report.html" class="stretched-link">Report</a></h3>
            <p></p>
          </div>
        </div><!-- End Card Item -->


```

dashboards.html

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```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="utf-8">
  <meta content="width=device-width, initial-scale=1.0" name="viewport">

  <title>Dashboards</title>
  <meta content="" name="description">
  <meta content="" name="keywords">

  <!-- Favicons -->
  <link href="assets/img/favicon.png" rel="icon">
  <link href="assets/img/apple-touch-icon.png" rel="apple-touch-icon">

  <!-- Google Fonts -->
  <link rel="preconnect" href="https://fonts.googleapis.com">
  <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin>
  <link href="https://fonts.googleapis.com/css2?family=Open+Sans:ital,wght@0,300;0,400;0,500;0,600;0,700;1,300;1,400;1,600;1,700&family=P

  <!-- Vendor CSS Files -->
  <link href="assets/vendor/bootstrap/css/bootstrap.min.css" rel="stylesheet">
  <link href="assets/vendor/bootstrap-icons/bootstrap-icons.css" rel="stylesheet">
  <link href="assets/vendor/fontawesome-free/css/all.min.css" rel="stylesheet">
  <link href="assets/vendor/glightbox/css/glightbox.min.css" rel="stylesheet">
  <link href="assets/vendor/swiper/swiper-bundle.min.css" rel="stylesheet">
  <link href="assets/vendor/aos/aos.css" rel="stylesheet">

  <!-- Template Main CSS File -->
  <link href="assets/css/main.css" rel="stylesheet">

  <!-- =======================================================
  * Template Name: Logis - v1.2.1
  * Template URL: https://bootstrapmade.com/logis-bootstrap-logistics-website-template/
  * Author: BootstrapMade.com
  * License: https://bootstrapmade.com/license/
</head>

<body>

  <!-- ======= Header ======= -->
  <header id="header" class="header d-flex align-items-center fixed-top">
    <div class="container-fluid container-xl d-flex align-items-center justify-content-between">

      <a href="index.html" class="logo d-flex align-items-center">
        <!-- Uncomment the line below if you also wish to use an image logo -->
        <!-- <img src="assets/img/logo.png" alt=""> -->
        <h1>Logis</h1>
      </a>

      <i class="mobile-nav-toggle mobile-nav-show bi bi-list"></i>
      <i class="mobile-nav-toggle mobile-nav-hide d-none bi bi-x"></i>
      <nav id="navbar" class="navbar">
        <ul>
          <li><a href="index.html" class="active">Home</a></li>
          <li><a href="about.html">About</a></li>
          <li class="dropdown"><a href="#"><span>IBM Cognos Analytics</span> <i class="bi bi-chevron-down dropdown-indicator"></i></a>
            <ul>
              <li><a href="dashboards.html">Dashboards</a></li>

              <li><a href="story.html">Story</a></li>
              <li><a href="report.html">Report</a></li>
            </ul>
          </li>
          <li><a class="get-a-quote" href="login/logout.php">Logout</a></li>
        </ul>
      </nav><!-- .navbar -->

    </div>
  </header><!-- End Header -->
  <!-- End Header -->
```

```
  <!-- ======= Hero Section ======= -->
  <section id="hero" class="hero d-flex align-items-center">
    <div class="container">
      <div class="row gy-4 d-flex justify-content-between">
        <div class="col-lg-6 order-2 order-lg-1 d-flex flex-column justify-content-center">
          <h2 data-aos="fade-up">IBM COGNOS ANALYTICS</h2>
          <p data-aos="fade-up" data-aos-delay="100">Dashboards are a collection of widgets that give you an overview of the reports and
.</p>



          <div class="row gy-4" data-aos="fade-up" data-aos-delay="400">

            <div class="col-lg-3 col-6">
              <div class="stats-item text-center w-100 h-100">

              </div>
            </div><!-- End Stats Item -->

            <div class="col-lg-3 col-6">
              <div class="stats-item text-center w-100 h-100">

              </div>
            </div><!-- End Stats Item -->

            <div class="col-lg-3 col-6">
              <div class="stats-item text-center w-100 h-100">

              </div>
            </div><!-- End Stats Item -->

            <div class="col-lg-3 col-6">
              <div class="stats-item text-center w-100 h-100">

              </div>
            </div><!-- End Stats Item -->

          </div>
        </div>

        <div class="col-lg-5 order-1 order-lg-2 hero-img" data-aos="zoom-out">
        </div>

      </div>
    </div>
  </section><!-- End Hero Section -->

  <main id="main">



    <!-- ======= Services Section ======= -->
    <section id="service" class="services pt-0">
      <div class="container" data-aos="fade-up">

        <div class="section-header">
          <span>Dashboards</span>
          <h2>Dashboards</h2>

        </div>



    </section><!-- End Services Section -->
    <section>
        <center><iframe src="https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&amp;pathRef=.my_folders%2FPort%2BTraffic%2BDashbo
</center>
    </section>


    <!-- ======= Call To Action Section ======= -->
    <section id="call-to-action" class="call-to-action">
      <div class="container" data-aos="zoom-out">
```

```
147
148             <div class="row justify-content-center">
149               <div class="col-lg-8 text-center">
150                 <h3>Map Dashboard</h3></div>
151               </div>
152
153           </div>
154     <section>
155             <center><iframe src="https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&amp;pathRef=.my_folders%2Fmap%2Bdashboard&amp;clo
156             </center>
157     </section>
158
159                     </section><!-- End Call To Action Section -->
160
161
162
163
164
165
166       <!-- ======= Frequently Asked Questions Section ======= -->
167
168
169     </main><!-- End #main -->
170
171     <!-- ======= Footer ======= -->
172     <footer id="footer" class="footer">
173
174       <div class="container">
175         <div class="row gy-4">
176           <div class="col-lg-5 col-md-12 footer-info">
177             <a href="index.html" class="logo d-flex align-items-center">
178               <span></span>
179             </a>
180             <p></p>
181             <div class="social-links d-flex mt-4">
182               <a href="#" class="twitter"><i class="bi bi-github"></i></a>
```

```
200               Sona College of Technology<br>
201               Salem, TN<br>
202               India <br><br>
203               <strong>Phone:</strong> 8015355385<br>
204               <strong>Email:</strong> gokulkrishnant99@gmail.com<br>
205             </p>
206
207           </div>
208
209         </div>
210       </div>
211
212       <div class="container mt-4">
213         <div class="copyright">
214           &copy; Copyright <strong><span>Logis</span></strong>. All Rights Reserved
215         </div>
216         <div class="credits">
217
218         </div>
219       </div>
220
221     </footer>
222
223     <a href="#" class="scroll-top d-flex align-items-center justify-content-center"><i class="bi bi-arrow-up-short"></i></a>
224
225     <div id="preloader"></div>
226
227     <script src="assets/vendor/bootstrap/js/bootstrap.bundle.min.js"></script>
228     <script src="assets/vendor/purecounter/purecounter_vanilla.js"></script>
229     <script src="assets/vendor/glightbox/js/glightbox.min.js"></script>
230     <script src="assets/vendor/swiper/swiper-bundle.min.js"></script>
231     <script src="assets/vendor/aos/aos.js"></script>
232     <script src="assets/vendor/php-email-form/validate.js"></script>
233     <script src="assets/js/main.js"></script>
234   </body>
235   </html>
```

Report.html

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```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="utf-8">
  <meta content="width=device-width, initial-scale=1.0" name="viewport">

  <title>Dashboards</title>
  <meta content="" name="description">
  <meta content="" name="keywords">

  <link href="assets/img/favicon.png" rel="icon">
  <link href="assets/img/apple-touch-icon.png" rel="apple-touch-icon">

  <link rel="preconnect" href="https://fonts.googleapis.com">
  <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin>
  <link href="https://fonts.googleapis.com/css2?family=Open+Sans:ital,wght@0,300;0,400;0,500;0,600;0,700;1,300;1,400;1,600;1,700&family=P

  <link href="assets/vendor/bootstrap/css/bootstrap.min.css" rel="stylesheet">
  <link href="assets/vendor/bootstrap-icons/bootstrap-icons.css" rel="stylesheet">
  <link href="assets/vendor/fontawesome-free/css/all.min.css" rel="stylesheet">
  <link href="assets/vendor/glightbox/css/glightbox.min.css" rel="stylesheet">
  <link href="assets/vendor/swiper/swiper-bundle.min.css" rel="stylesheet">
  <link href="assets/vendor/aos/aos.css" rel="stylesheet">

  <link href="assets/css/main.css" rel="stylesheet">


</head>

<body>

  <header id="header" class="header d-flex align-items-center fixed-top">
    <div class="container-fluid container-xl d-flex align-items-center justify-content-between">

      <a href="index.html" class="logo d-flex align-items-center">
        <h1>Logis</h1>
      </a>

      <i class="mobile-nav-toggle mobile-nav-show bi bi-list"></i>
      <i class="mobile-nav-toggle mobile-nav-hide d-none bi bi-x"></i>
      <nav id="navbar" class="navbar">
        <ul>
          <li><a href="index.html" class="active">Home</a></li>
          <li><a href="about.html">About</a></li>
          <li class="dropdown"><a href="#"><span>IBM Cognos Analytics</span> <i class="bi bi-chevron-down dropdown-indicator"></i></a>
            <ul>
              <li><a href="dashboards.html">Dashboards</a></li>

              <li><a href="story.html">Story</a></li>
              <li><a href="report.html">Report</a></li>
            </ul>
          </li>
          <li><a class="get-a-quote" href="login/logout.php">Logout</a></li>
        </ul>
      </nav><!-- .navbar -->

    </div>
  </header>
  <section id="hero" class="hero d-flex align-items-center">
    <div class="container">
      <div class="row gy-4 d-flex justify-content-between">
        <div class="col-lg-6 order-2 order-lg-1 d-flex flex-column justify-content-center">
          <h2 data-aos="fade-up">IBM COGNOS ANALYTICS</h2>
          <p data-aos="fade-up" data-aos-delay="100">
.</p>



          <div class="row gy-4" data-aos="fade-up" data-aos-delay="400">

```

```
            <div class="col-lg-3 col-6">
              <div class="stats-item text-center w-100 h-100">

              </div>
            </div><!-- End Stats Item -->

            <div class="col-lg-3 col-6">
              <div class="stats-item text-center w-100 h-100">

              </div>
            </div><!-- End Stats Item -->

            <div class="col-lg-3 col-6">
              <div class="stats-item text-center w-100 h-100">

              </div>
            </div><!-- End Stats Item -->

            <div class="col-lg-3 col-6">
              <div class="stats-item text-center w-100 h-100">

              </div>
            </div><!-- End Stats Item -->

          </div>
        </div>

        <div class="col-lg-5 order-1 order-lg-2 hero-img" data-aos="zoom-out">
        </div>

      </div>
    </div>
  </section><!-- End Hero Section -->

  <main id="main">
```

```
    <section id="service" class="services pt-0">
      <div class="container" data-aos="fade-up">

        <div class="section-header">
          <span>Report</span>
          <h2>Report</h2>

        </div>



    </section><!-- End Services Section -->
    <section>
        <center><iframe src="https://us3.ca.analytics.ibm.com/bi/?pathRef=.my_folders%2Fport%2Bnew%2Bactive%2Breport&amp;closeWindowOnLas
    </section>



  </main><!-- End #main -->

  <!-- ======= Footer ======= -->
  <footer id="footer" class="footer">

    <div class="container">
      <div class="row gy-4">
        <div class="col-lg-5 col-md-12 footer-info">
          <a href="index.html" class="logo d-flex align-items-center">
            <span></span>
          </a>
          <p></p>
          <div class="social-links d-flex mt-4">
            <a href="#" class="twitter"><i class="bi bi-github"></i></a>
            <a href="#" class="facebook"><i class="bi bi-facebook"></i></a>
            <a href="#" class="instagram"><i class="bi bi-twitter"></i></a>
            <a href="#" class="linkedin"><i class="bi bi-linkedin"></i></a>
```

```
148            </div>
149          </div>
150
151          <div class="col-lg-2 col-6 footer-links">
152
153          </div>
154
155          <div class="col-lg-2 col-6 footer-links">
156
157          </div>
158
159          <div class="col-lg-3 col-md-12 footer-contact text-center text-md-start">
160            <h4>Contact Us</h4>
161            <p>
162              Sona College of Technology<br>
163              Salem, TN<br>
164              India <br><br>
165              <strong>Phone:</strong> 8015355385<br>
166              <strong>Email:</strong> gokulkrishnant99@gmail.com<br>
167            </p>
168
169          </div>
170
171        </div>
172      </div>
173
174      <div class="container mt-4">
175        <div class="copyright">
176          &copy; Copyright <strong><span>Logis</span></strong>. All Rights Reserved
177        </div>
178        <div class="credits">
179
180        </div>
181      </div>
182
183    <a href="#" class="scroll-top d-flex align-items-center justify-content-center"><i class="bi bi-arrow-up-short"></i></a>
```

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```
182
183    <a href="#" class="scroll-top d-flex align-items-center justify-content-center"><i class="bi bi-arrow-up-short"></i></a>
184
185    <div id="preloader"></div>
186    <script src="assets/vendor/bootstrap/js/bootstrap.bundle.min.js"></script>
187    <script src="assets/vendor/purecounter/purecounter_vanilla.js"></script>
188    <script src="assets/vendor/glightbox/js/glightbox.min.js"></script>
189    <script src="assets/vendor/swiper/swiper-bundle.min.js"></script>
190    <script src="assets/vendor/aos/aos.js"></script>
191    <script src="assets/vendor/php-email-form/validate.js"></script>
192    <script src="assets/js/main.js"></script>
193
194  </body>
195
196  </html>
```

Story.html

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```
<!DOCTYPE html>
<html lang="en">

<head>
  <meta charset="utf-8">
  <meta content="width=device-width, initial-scale=1.0" name="viewport">

  <title>Dashboards</title>
  <meta content="" name="description">
  <meta content="" name="keywords">

  <!-- Favicons -->
  <link href="assets/img/favicon.png" rel="icon">
  <link href="assets/img/apple-touch-icon.png" rel="apple-touch-icon">

  <!-- Google Fonts -->
  <link rel="preconnect" href="https://fonts.googleapis.com">
  <link rel="preconnect" href="https://fonts.gstatic.com" crossorigin>
  <link href="https://fonts.googleapis.com/css2?family=Open+Sans:ital,wght@0,300;0,400;0,500;0,600;0,700;1,300;1,400;1,600;1,700&family=P

  <!-- Vendor CSS Files -->
  <link href="assets/vendor/bootstrap/css/bootstrap.min.css" rel="stylesheet">
  <link href="assets/vendor/bootstrap-icons/bootstrap-icons.css" rel="stylesheet">
  <link href="assets/vendor/fontawesome-free/css/all.min.css" rel="stylesheet">
  <link href="assets/vendor/glightbox/css/glightbox.min.css" rel="stylesheet">
  <link href="assets/vendor/swiper/swiper-bundle.min.css" rel="stylesheet">
  <link href="assets/vendor/aos/aos.css" rel="stylesheet">

  <!-- Template Main CSS File -->
  <link href="assets/css/main.css" rel="stylesheet">

  <!-- =======================================================
  * Template Name: Logis - v1.2.1
  * Template URL: https://bootstrapmade.com/logis-bootstrap-logistics-website-template/
  * Author: BootstrapMade.com
  * License: https://bootstrapmade.com/license/
  ======================================================== -->
</head>

<body>

  <!-- ======= Header ======= -->
  <header id="header" class="header d-flex align-items-center fixed-top">
    <div class="container-fluid container-xl d-flex align-items-center justify-content-between">

      <a href="index.html" class="logo d-flex align-items-center">
        <!-- Uncomment the line below if you also wish to use an image logo -->
        <!-- <img src="assets/img/logo.png" alt=""> -->
        <h1>Logis</h1>
      </a>

      <i class="mobile-nav-toggle mobile-nav-show bi bi-list"></i>
      <i class="mobile-nav-toggle mobile-nav-hide d-none bi bi-x"></i>
      <nav id="navbar" class="navbar">
        <ul>
          <li><a href="index.html" class="active">Home</a></li>
          <li><a href="about.html">About</a></li>
          <li class="dropdown"><a href="#"><span>IBM Cognos Analytics</span> <i class="bi bi-chevron-down dropdown-indicator"></i></a>
            <ul>
              <li><a href="dashboards.html">Dashboards</a></li>

              <li><a href="story.html">Story</a></li>
              <li><a href="report.html">Report</a></li>
            </ul>
          </li>
          <li><a class="get-a-quote" href="login/logout.php">Logout</a></li>
        </ul>
      </nav><!-- .navbar -->

    </div>
  </header><!-- End Header -->
  <!-- End Header -->
```

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```
  <!-- ======= Hero Section ======= -->
  <section id="hero" class="hero d-flex align-items-center">
    <div class="container">
      <div class="row gy-4 d-flex justify-content-between">
        <div class="col-lg-6 order-2 order-lg-1 d-flex flex-column justify-content-center">
          <h2 data-aos="fade-up">IBM COGNOS ANALYTICS</h2>
          <p data-aos="fade-up" data-aos-delay="100">Dashboards are a collection of widgets that give you an overview of the reports and
.</p>



          <div class="row gy-4" data-aos="fade-up" data-aos-delay="400">

            <div class="col-lg-3 col-6">
              <div class="stats-item text-center w-100 h-100">

              </div>
            </div><!-- End Stats Item -->

            <div class="col-lg-3 col-6">
              <div class="stats-item text-center w-100 h-100">

              </div>
            </div><!-- End Stats Item -->

            <div class="col-lg-3 col-6">
              <div class="stats-item text-center w-100 h-100">

              </div>
            </div><!-- End Stats Item -->

            <div class="col-lg-3 col-6">
              <div class="stats-item text-center w-100 h-100">

              </div>
            </div><!-- End Stats Item -->
```

```
          </div>
        </div>

        <div class="col-lg-5 order-1 order-lg-2 hero-img" data-aos="zoom-out">
        </div>

      </div>
    </div>
  </section><!-- End Hero Section -->

  <main id="main">



    <!-- ======= Services Section ======= -->
    <section id="service" class="services pt-0">
      <div class="container" data-aos="fade-up">

        <div class="section-header">
          <span>Story</span>
          <h2>Story</h2>

        </div>



    </section><!-- End Services Section -->
    <section>
        <center><iframe src="https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&amp;pathRef=.my_folders%2FPort%2BTraffic%2BDashbo
</center>
    </section>


    <!-- ======= Call To Action Section ======= -->
```

```
    <!-- ======= Frequently Asked Questions Section ======= -->


  </main><!-- End #main -->

  <!-- ======= Footer ======= -->
  <footer id="footer" class="footer">

    <div class="container">
      <div class="row gy-4">
        <div class="col-lg-5 col-md-12 footer-info">
          <a href="index.html" class="logo d-flex align-items-center">
            <span></span>
          </a>
          <p></p>
          <div class="social-links d-flex mt-4">
            <a href="#" class="twitter"><i class="bi bi-github"></i></a>
            <a href="#" class="facebook"><i class="bi bi-facebook"></i></a>
            <a href="#" class="instagram"><i class="bi bi-twitter"></i></a>
            <a href="#" class="linkedin"><i class="bi bi-linkedin"></i></a>
          </div>
        </div>

        <div class="col-lg-2 col-6 footer-links">

        </div>

        <div class="col-lg-2 col-6 footer-links">

        </div>

        <div class="col-lg-3 col-md-12 footer-contact text-center text-md-start">
          <h4>Contact Us</h4>
          <p>
            Sona College of Technology<br>
            Salem, TN<br>
            India <br><br>
            <strong>Phone:</strong> 8015355385<br>
            <strong>Email:</strong> gokulkrishnant99@gmail.com<br>
          </p>

        </div>

      </div>
    </div>

    <div class="container mt-4">
      <div class="copyright">
        &copy; Copyright <strong><span>Logis</span></strong>. All Rights Reserved
      </div>
      <div class="credits">
        <!-- All the links in the footer should remain intact. -->
        <!-- You can delete the links only if you purchased the pro version. -->
        <!-- Licensing information: https://bootstrapmade.com/license/ -->
        <!-- Purchase the pro version with working PHP/AJAX contact form: https://bootstrapmade.com/logis-bootstrap-logistics-website-tem
      </div>
    </div>

  </footer><!-- End Footer -->
  <!-- End Footer -->

  <a href="#" class="scroll-top d-flex align-items-center justify-content-center"><i class="bi bi-arrow-up-short"></i></a>

  <div id="preloader"></div>

  <!-- Vendor JS Files -->
  <script src="assets/vendor/bootstrap/js/bootstrap.bundle.min.js"></script>
  <script src="assets/vendor/purecounter/purecounter_vanilla.js"></script>
  <script src="assets/vendor/glightbox/js/glightbox.min.js"></script>
  <script src="assets/vendor/swiper/swiper-bundle.min.js"></script>
  <script src="assets/vendor/aos/aos.js"></script>
  <script src="assets/vendor/php-email-form/validate.js"></script>
```

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```
    <!-- Vendor JS Files -->
    <script src="assets/vendor/bootstrap/js/bootstrap.bundle.min.js"></script>
    <script src="assets/vendor/purecounter/purecounter_vanilla.js"></script>
    <script src="assets/vendor/glightbox/js/glightbox.min.js"></script>
    <script src="assets/vendor/swiper/swiper-bundle.min.js"></script>
    <script src="assets/vendor/aos/aos.js"></script>
    <script src="assets/vendor/php-email-form/validate.js"></script>

    <!-- Template Main JS File -->
    <script src="assets/js/main.js"></script>

  </body>

  </html>
```

8. TESTING.

8.1 TEST CASE

A test case has components that describe input, action and an expected response, in order to determine if a feature of an application is working correctly. A test case is a set of instruction “HOW” to validate a particular test objective/target, Which when followed will tell us if the expected behaviour of the system is satisfied or not.

Characteristics of good test care:

Accurate: Exacts the purpose.

Economical: No unnecessary steps or words.

Traceable : Capable of being traced to requirements.

Repeatable: Can be used to perform the test over and over.

Reusable: Can be reused if necessary.

8.2 User Acceptance Testing What is UAT?

User Acceptance Testing (UAT) is a type of testing performed by the end user or the client to verify/accept the software system before moving the software application to the production environment. UAT is done in the final phase of testing after functional, integration and system testing is done.

This sort of testing is carried out by clients, or other authorized bodies to identify the requirements and operational procedures of an applications or piece of software. The most crucial stage of testing is acceptance testing since it determine whether or not the customer will accept the application or programmer. It could entail the application's U I., performance, usability, and usefulness. It is also referred to as end-user testing . Operational acceptance testing. And user acceptance testing (UAT).

9.RESULTS

9.1Performance Metrics.

Model Performance Testing:

Project team shall fill the following information in model performance testing template.

S.No.	Parameter	Screenshot / Values
1.	Dashboard design	No of Visulizations / Graphs - 19
2.	Data Responsiveness	Positive
3.	Amount Data to Rendered (DB2 Metrics)	Two data were rendered: Traffic percentage And Total capacity percentage
4.	Utilization of Data Filters	! filter was used in Dashboard for Collage tab
5.	Effective User Story	No of Scene Added – 4 Scenes
6.	Descriptive Reports	No of Visulizations / Graphs - 5

The infrasound of agropastoral development and capacity augmentation of major ports is a continual process. The process inter-alia includes mechanization of the ports by way of use of latest version of crane and other equipment/techniques for quicker turnaround of cargo

10 ADVANTAGES & DISADVANTAGES

10.1 ADVANTAGES.

1.The generative models can perform recognition driven segmentation.

2.The method involves a relatively.

3.High (99.1) accuracy.

4.Quick detection.

10.2 DISADVANTAGES.

1.Poor location accuracy.

2.Used for specific purposes only.

11.Conclusion

The investment in port infrastructure is critical to maintain the necessary capacity for an efficiently functioning port system and to meet expected demand growth forall types of cargo. However, these large-scale, expensive investments in long-term infrastructure assets must be made despite a variety of future uncertainties that may potentially influence a port's throughput demand. The objective of this thesis was to enhance the investment decision-making process for port infrastructure through the application and modification of existing methodologies and the development of an investment tool.

12.FUTURE SCOPE.

Extend the capacity measurement methodology to those port components and terminal types that were not tested in this thesis. Port components for examination include port terminal gates, rail connectivity such as rail terminal gates and rail yards (in addition to the rail network), and the road network; terminal types include ro-ro (rolling-on, rolling-off cargo, such as vehicles), cruise, and passed.

13. APPENDIX.

Source Code link:

https://drive.google.com/drive/folders/16Dbt10yIZw_61VEyffywOdlFwFeNNsI4?usp=sharing

GITHUB link:

https://github.com/IBM-EPBL/IBM-Project-26327-1660025127

DEMO link:

https://www.loom.com/share/3027d1b09a5f42f79f6723d3dc299134