# Project Scope & Responsibility Document

## 1. Project Title:

High-Resolution Imaging System for Whiteness and Dirt Contamination Detection at Atholville

## 2. Problem Statement:

The client requires an integrated imaging solution capable of accurately measuring both Berger Whiteness Index and Dirt Particulate Contamination in pulp mats using a single high-resolution camera. Due to site constraints, separate cameras cannot be deployed. The solution must comply with ISO 5350-2:2006 for dirt detection, operate under high-speed pulp flow conditions, and provide remote configurability and data visualization. Additional challenges include managing lighting requirements, ensuring field scalability, and enabling potential future integrations such as moisture monitoring.

## 3. Scope of Work – Vendor Side:

* Design and integrate a unified imaging system using the SP-45000C 45MP camera for both whiteness and dirt detection.
* Configure lighting systems to enable alternate front/back lighting for the two functions.
* Assemble and fully test the complete hardware and software system in Hyderabad.
* Develop a dashboard interface for visualization of:  
  - Berger Index (BI) values (mean, min, max)  
  - Dirt particle count distributions across 5 ISO-defined classes
* Implement historian-based storage architecture with integration to Optimon for storing analysis results.
* Enable remote configuration and diagnostics through the Edge PC setup.
* Provide detailed documentation, configuration diagrams, and remote support post-installation.
* Offer options for future scalability including:  
  - Additional cameras or prism camera upgrades  
  - Integration of KLED-70 Moisture Sensors

## 4. Scope of Work – Client Side:

* Procure and supply locally:  
  - Edge PC screen, keyboard, mouse  
  - LED lighting battens (6500k)  
  - Interface Control Cabinet
* Handle onsite installation, including:  
  - Mechanical mounting of the camera  
  - Fiber optic connectivity between camera and Edge PC
* Coordinate the delivery of the assembled solution from Hyderabad to Atholville.
* Participate in defining dashboard UI preferences and visualization metrics.
* Assist in finalizing the storage location and access strategy for the collected data.
* Provide network access for remote configuration and ongoing support.

## 5. Deliverables:

* Fully configured imaging system (hardware + software)
* Real-time dashboard for:  
  - Berger Whiteness Index  
  - Dirt contamination visualization
* ISO-compliant data collection and reporting framework
* Remote diagnostic capability through Edge PC
* Configuration diagrams and technical documentation
* Integration with Optimon for historian storage
* Support for future camera/sensor expansion

**6. Internal risk of delay of project**

* Delay in Availability of hardware from different suppliers
* Delay in software development

**7. External risk of delay of project**

* Delay in shipping from Hyderabad to Canada due to customs clearance, freight issues
* Site personnel delays in sourcing local components (Edge PC screen, keyboard, mouse, lighting battens, control cabinet) or delay in preparing installation, fiber cabling, mounting
* Delay in site readiness