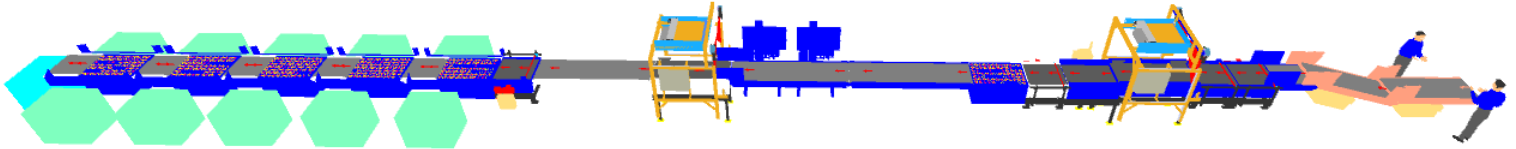# 7. Proposed System Description

7.1 Objective

The purpose of this proposal is to present the design, manufacturing, installation, commissioning, testing and acceptance testing of the **SWEDI Sorter** for sorting parcels.

7.2 Summary of the System

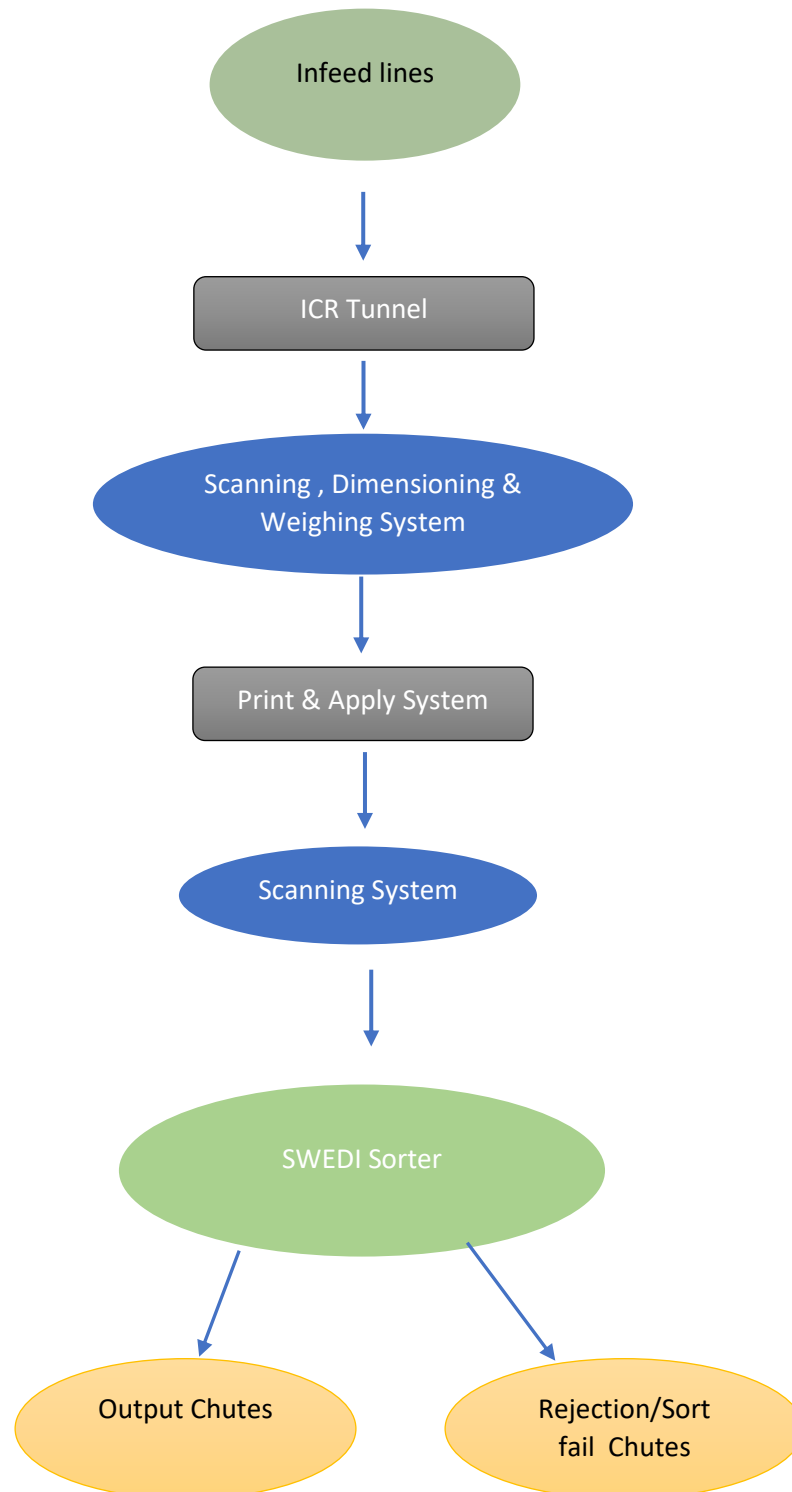Process flow of the SWEDI Sorter System-

1. **Infeed System: -** Parcel are loaded manually on the loading conveyor present at the beginning of the sorter. Parcel loaded here travel further to ICR for scanning.

2. **Parcel Scanning & Weighing: -** Once the parcels reach the Scanning zone, Set of Buffer conveyors automatically maintain sufficient space between two parcels, Now the singulated parcel will get scanned via ICR & its weight will be captured with the help of dynamic weighing machine.

3. **Print & Apply System:** Once the shipment passes from scanning tunnel it reaches to print & apply system, the label will be automatically applied by the P&A System

4. **SWEDI Sorter: -** Once the parcels are on main sorter line, the SWEDI diverters sorts the parcels into respective chutes using data from Mark3 International Sorting logic.

5. **Output Chutes: - The shipments are discharged into different types of chutes-**
   a. **Output Chute- 10** Output chutes (roll cage type) are present in the system. Parcels sorted in this chutes gets collected in Magnum (Client Scope)
   b. **Rejection Chute-** One rejection chute is present at the end to handle rejected parcels.

7.3 Main benefits of the SWEDI System
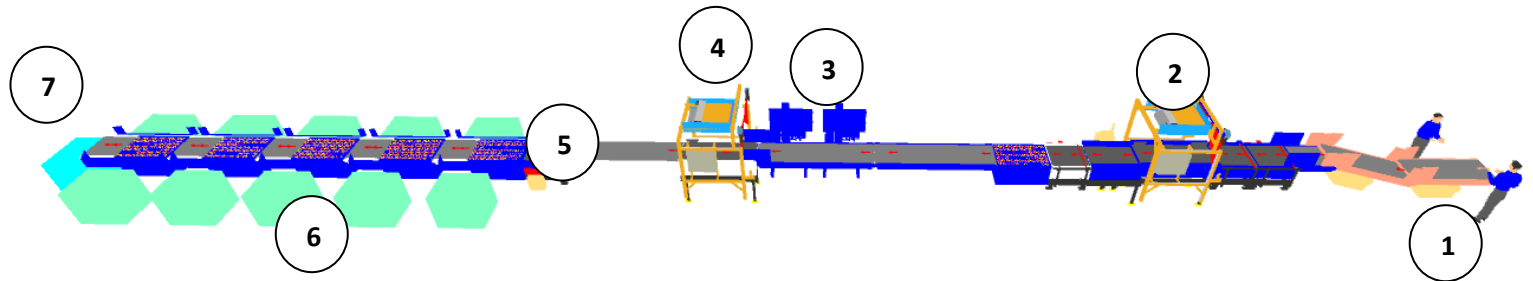
The proposed solution has the following advantages:

1. Low occupancy of floor space in the building

2. Narrow discharge centers for the increased number of splits in limited space.

3. FALCON's SWEDI sorter can adapt to changing business requirements by adjusting its speed to match the operational throughput requirement, thereby leading to Power Savings and reduced system Wear & Tear.

8. Concept Description

```
          ┌─────────────────┐
          │   Infeed lines   │
          └─────────────────┘
                   │
                   ▼
          ┌─────────────────┐
          │    ICR Tunnel    │
          └─────────────────┘
                   │
                   ▼
     ┌───────────────────────────┐
     │  Scanning , Dimensioning & │
     │     Weighing System        │
     └───────────────────────────┘
                   │
                   ▼
          ┌─────────────────┐
          │ Print & Apply System │
          └─────────────────┘
                   │
                   ▼
          ┌─────────────────┐
          │ Scanning System  │
          └─────────────────┘
                   │
                   ▼
          ┌─────────────────┐
          │   SWEDI Sorter   │
          └─────────────────┘
              ╱          ╲
             ▼            ▼
    ┌──────────────┐  ┌──────────────┐
    │ Output Chutes │  │ Rejection/Sort│
    │              │  │  fail  Chutes │
    └──────────────┘  └──────────────┘
```

9. Layout View of SWEDI Sorter

Legend

1. Loading Conveyor

2. Scanning, Weighing & Dimensioning System

3. Print & Apply System

4. Scanning/ICR Tunnel

5. SWEDI Sorter

6. Output Chute

7. Rejection/Sort Fail Chute