



Issue and Currency / Industrial Affairs

Cash Management Center Project

Agenda

Statement

- 1- General Background
- 2- Project Development
- 3- Printing Works
- 4- Issue and Currency
- 5- Closing Remarks
- 6- Pictures



Statement

The Project has been conceived as an Industrial Complex that will integrate in a single center:

- Banknote production
- Currency processing (sorting) and distribution
- Currency storage in a single automated vault
- Banknote research and development activities.

It will create high efficiency and security in providing the currency required by national financial system, and in meeting the potential demand from other countries



1. General Background

Four Reasons Originated the Project:

- The need to solve the space limitations of the current Printing Works building
- The need for facilities that meet the highest security standards for this type of activity
- The risks generated by frequent banknote transportation, due to the separate operations of the Printing Works and the Issue and Currency Department .
- The weaknesses of the current buildings as regards guaranteeing the continuity of critical operations in cases of emergency.



1.1 Space Limitations

At the Printing Works

- Two old production lines existed and the current building does not allow for the installation of new machinery with larger capacities, thereby putting at risk the attention to the growing demand for banknotes.
- The vertical structure on five floors prevents the achievement of greater efficiency in the production cycle.
- The current Printing Works is located in a building with limitations regarding the possibilities for strengthening security in accordance with current technological standards.
- Higher operational risks due to obsolete installations (sanitary, hydraulic, air conditioning), which are approaching the end of their half-life.



1.2 Space Limitations and risks

At the Issue and Currency Department (ICD)

- The ICD has two operational sites: Main Office and the Auxiliary Issue and Currency building; the latter having only space to cater for four simultaneous armoured vehicles, meaning that other vehicles have to wait in line outside in the street, thus generating security hazards.
- There is a great deal of currency movement between the Printing Works, the Main Office and the Auxiliary Issue and Currency Area with high risks and costs associated.
- Space limitations at main vault for the storage of banknotes at production peaks tend to become critical with the increase of circulating banknotes.
- The armoured-vehicles lift at Main Office is obsolete and is becoming a high-impact point of failure for ICD.



2. Project Development

Conclusions of the evaluation performed by the Bank of England

- The best alternative, for financial as well as security reasons, is to build a new site for the Printing Works facilities.
- In order to maintain the international competitiveness of the Printing Works, it is highly recommended to move its operations to other facilities where a new printing line can be added to the current machinery.
- Issue and Currency operations should be included in the design of the new facilities.



Evaluated Models

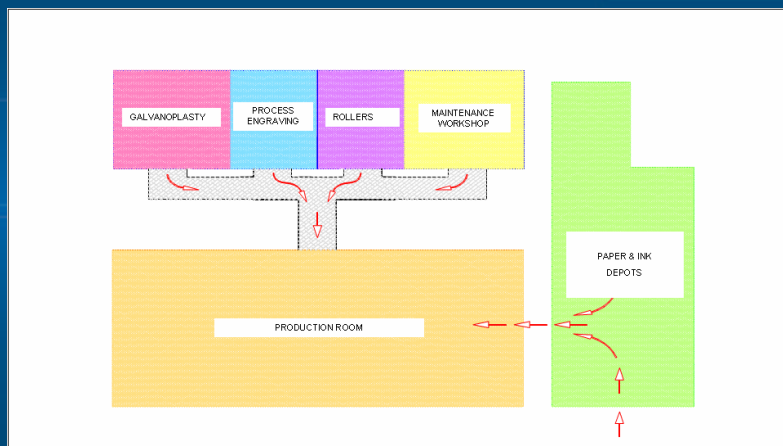
- Banco de la República visited some Central Banks that have automated vaults and decided to incorporate the following aspects into the project: a single vertical-structure vault operated by an automatically guided vehicles system, and an integrated transport control system.
- The location criteria and parameters set forth by the "Guideline Manual for Security in New Construction" issued by the "Board of Governors of the Federal Reserve Systems"



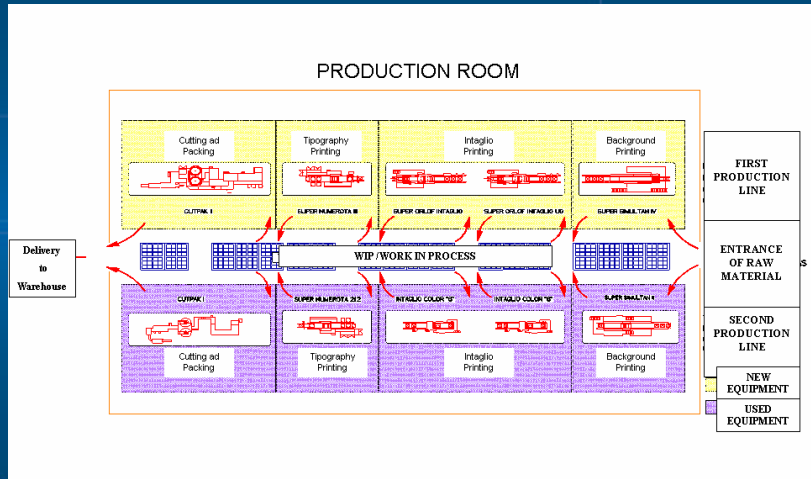
Complex General View



3 Printing Works Area



3 Printing Works Area



Production Line Picture



Production Capacity

The Cash Management Centre is designed to operate with two production lines; the first production line will be equipped with new machinery that offers large-printing format and high speed. This first line will replace the machinery that has been in operation for more than 25 years. The second production line is composed of currently operating equipment that is due for an overhauling process.

The expected increase in production capacity is 50%.

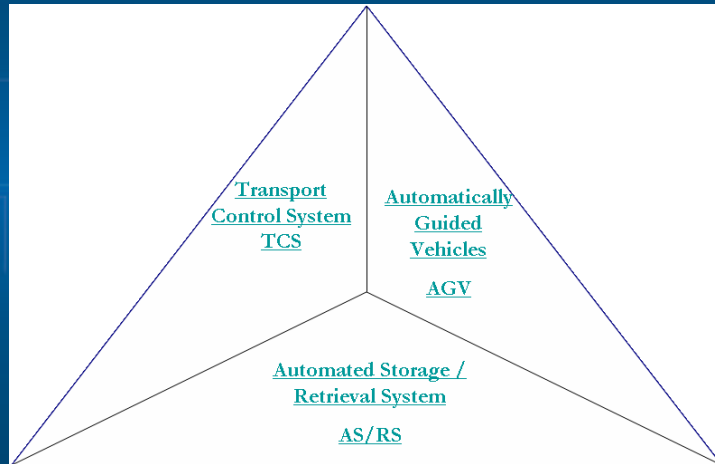


Printing Works Area Project Benefits

- Higher production capacity in response to growing demand for cash.
- Higher efficiency level due to the integration of the production cycle in a single level.
- Decrease in personnel-related expenses.
- Reduction in direct production expenses.
- Significant decrease in the consumption of certain production items (17% water, close to 70% in machinery-cleaning solutions, etc.).



4. Issue and Currency Area Cash Handling System (Automated Vault)



TCS System TCS System Points of Operation

First Floor

- Banknote Payment and Reception to and from Banks (8 windows – Each Room has 5 or 6 P/D Stations).
- Commercial Banks Preparation (1 Room).
- Pick-Up & Delivery to and from Branches (1 Room).
- Issue and Currency Department Area/ Printing Works Transference Room (1 Room).
- CDS400/OBS500 Destroyer's Room (1 Room).

Second Floor

- Manual Sorting (1 Room).
- Automated Sorting with In-line Destruction (6 Rooms and Possibly 2 more).
- Pre-sorting Room.
- AGV Service Workshop (1 Room).



Automated Guided Vehicles (AGV) (A



Automated Storage / Retrieval System (AS/RS) (AS/RS)



Containers



Trays



Issue and Currency Department Project Benefits

- Significant decrease in cash transport risks and costs.
- Improvement in Issue and Currency Procedures.
- Increase in physical security and reliability levels (lower risk).
- Decrease in Personnel-related Expenses (personnel staff, materials handling, etc.).
- Capability to cater for up to eight Armoured Vehicles simultaneously, improving the quality of service to Commercial Banks as well as reducing operational risks.



5. Closing Remarks

- The Project has been carefully designed, planned, developed and implemented, with the advice of international experts from different fields.
- The nation will have a modern, efficient and secure site for the production, storage and distribution of currency.
- Banknote transport risks and costs will be substantially reduced.
- Production costs will decrease due to the new technology and process reengineering.



5. Closing Remarks (cont.)

- Taking advantage of the Cash Management Centre development, a new Backup Computer Centre was built in order to guarantee business continuity of all electronic transactions with the Financial system.
- The Cash Management Centre will guarantee greater agility in the processes and improved currency supply services to financial institutions.
- Physical security levels for reliable operations will be enhanced.



5. Closing Remarks (cont.)

- The Cash Management Centre will have a greater storage capacity, taking into account that it will change from a horizontal to a vertical storage system.
- The larger production capacity means that Colombia will be self-sufficient to respond to the internal demand of currency and will have the potential to supply banknotes for other countries in the region as in the past.



6. Exterior Pictures.



6. Exterior Pictures.



6. Entrance Hall I.



6. Exterior Pictures.



6. Exterior Pictures.

