CASE STUDY - Paper usage and Resource Utilization

The Confidential company with 6,500+ employees, marketing and exporting base minerals has facilities in the Northern Cape, Mpumalanga, and North West Provinces of South Africa. The primary distribution focus is in Asia, however, global distribution spans across South Africa, North and South America, Europe, Middle East, and Australia.

We have addressed their one of the key challenging factors in reducing the usage of paper.

Contents

Challenges: Paper usage and Resource Utilization
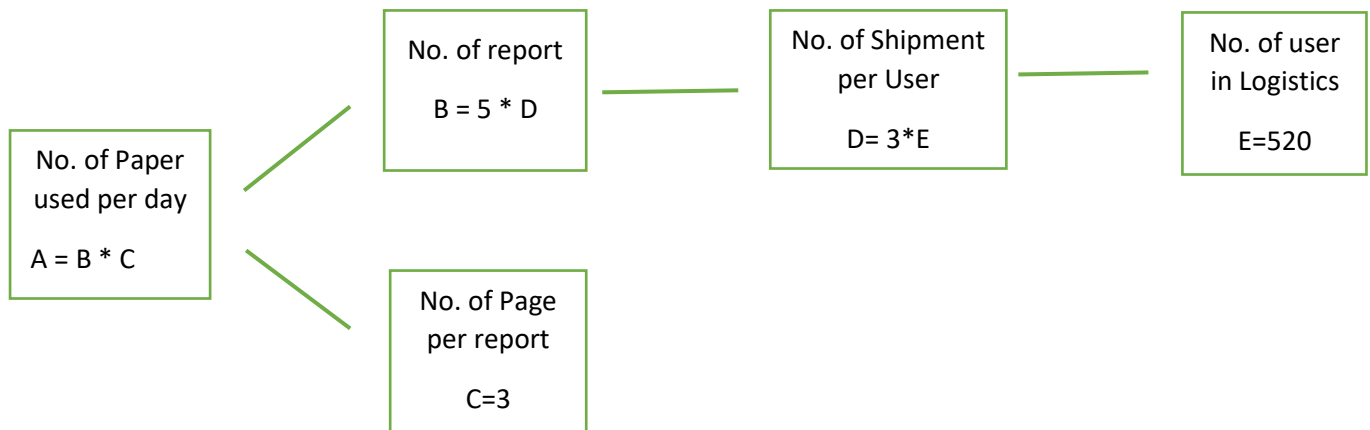
Paper usage of Logistics Department:

When the shipment is built and ready for sail,

1. User will print the set of documents for each shipment
2. Validate it
3. Sign and Seal, it
4. Scan the document
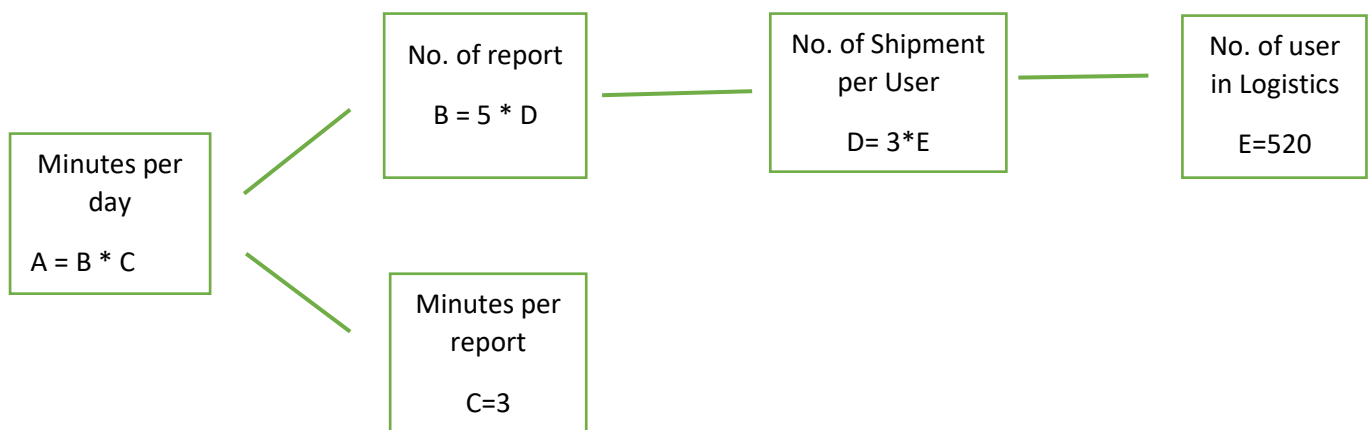5. Attach the Scanned document and Send out an email to harbor department

Few Metrics before we proceed,

- Department considered for the case study – Logistics, Finance
- No. of Logistics User: 520
- No. of Finance Users: 28
- Avg. No. of Shipments per user per day – 3
- Avg No. of Documents will get generated per shipment – 5 (Cargo value declaration-Exchange control, Shipping instruction, Marine Insurance, Packing details, cargo info form etc.,)
- Avg No. of Pages per document – 3
- Avg No. of Invoice per shipment – 0.75 (Few Shipment has multiple invoices and few shipment invoices are consolidated in to one Parent invoice)
- Avg no. of working days per Month = 20 (Considering weekends, Bank Holidays, Leave Plans)

Now, let us calculate the number of papers used by the Logistics

No. of Paper used per day $A = B * C$	No. of report $B = 5 * D$	No. of Shipment per User $D = 3*E$	No. of user in Logistics $E=520$
	No. of Page per report $C=3$		

Resource (Manpower) utilization:

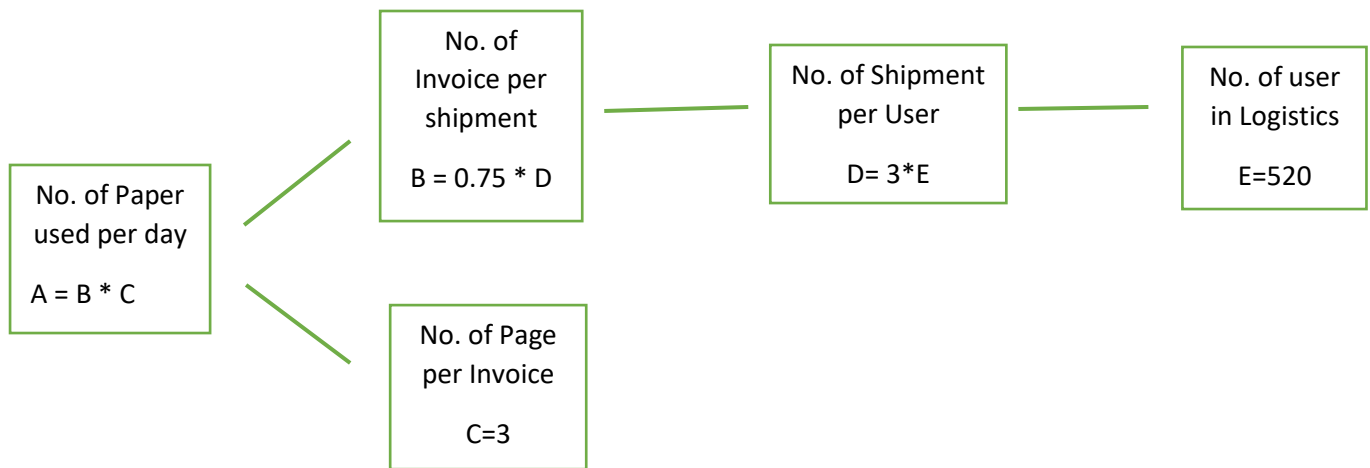| Minutes per day $A = B * C$	No. of report $B = 5 * D$	No. of Shipment per User $D = 3*E$	No. of user in Logistics $E=520$
	Minutes per report $C=3$		

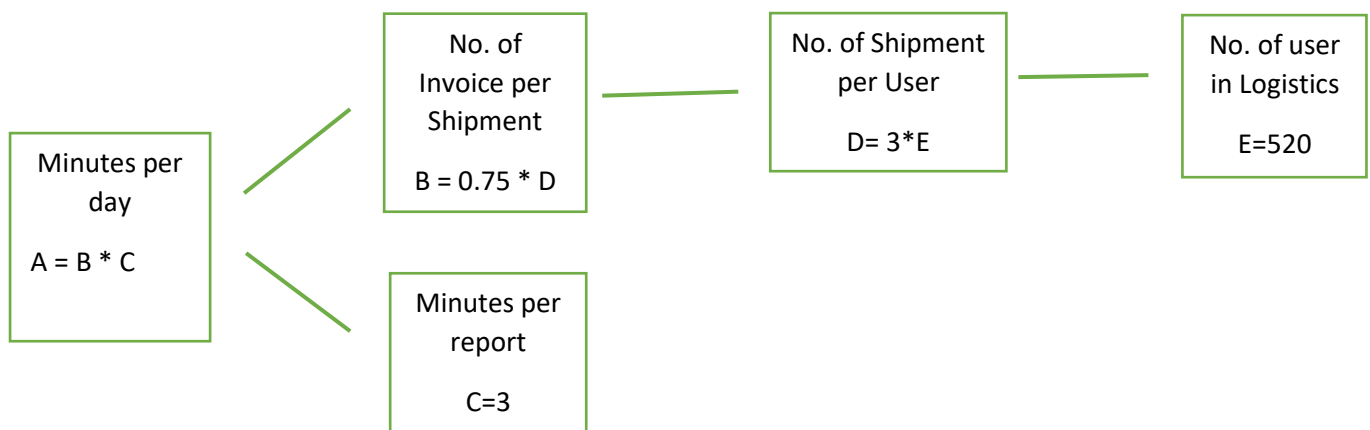| No of Paper used	Average Minutes spent on this activity
No. of Pages used per Day A = B * C	Average Minutes per day A = B * C
No. of Pages used per Day A = (5 * (3 * 520)) * 3	Average Minutes per day A = (5 * (3 * 520)) * 3
No. of Pages used per Day = 23,400 Papers	Average Minutes per User per Day = 23,400/ E = 23,400 / 520 = 45 Minutes
Average number of Papers used per year = 56,16,000 Papers	Average Minutes per User per Year = 10,800 Minutes = 180 Hours

Paper usage of Finance Department:

When the Invoice is generated, Finance department will print the supplier invoice, shipment Finance screenshot, and Invoice screenshot (Matching note) and will scan and send it to the Accounts department for payout.

Now, let us calculate the number of papers used by the Finance Department

No. of Invoice per shipment

B = 0.75 * D

No. of Shipment per User

D= 3*E

No. of user in Logistics

E=520

No. of Paper used per day

A = B * C

No. of Page per Invoice

C=3

Resource (Manpower) utilization:

No. of Invoice per Shipment

B = 0.75 * D

No. of Shipment per User

D= 3*E

No. of user in Logistics

E=520

Minutes per day

A = B * C

Minutes per report

C=3

No of Paper used	Average Minutes spent on this activity
No. of Pages used per Day A = B * C	Average Minutes per day A = B * C
No. of Pages used per Day A = (0.75 * (3 * 520)) * 3	Average Minutes per day A = (0.75 * (3 * 520)) * 3
No. of Pages used per Day = 3,510 Papers	Average Minutes per User per Day = 3,510/ E = 3,510 / 28 = 125 Minutes
Average number of Papers used per year = 8,42,400 Papers	Average Minutes per User per Year = 30,000 Minutes = 500 Hours

Challenges Summary:

Department of Logistics	
Average number of Papers used per year = 56,16,000 Papers	Average Minutes per User per Year = 10,800 Minutes = 180 Hours
Department of Finance	
Average number of Papers used per year = 8,42,400 Papers	Average Minutes per User per Year = 30,000 Minutes = 500 Hours
Total Paper and Resource utilization	
Total Paper used = 64,58,400	Total hours spend by resource for these activity = 680 hours

Solution: Automation

Department of Logistics:

Amend the Report design to DYNAMICALLY fetch the signatures based on the Logged-in user and fetch the commodity department seal based on the shipment commodity.

Hence while Logistics user generates the report, it will download with the signatures and seal, hence they can simply attach the document and send it to harbor.

Department of Finance:

Create a new report – Matching note, that will fetch the Shipment Finance details, Invoice details and System will automatically send it to the logged in user while approving the invoice as part of the workflow

Results:

Paper Usage:

Drastic improvement in the reduction of paper usages in both the department and have reduced as a total average of 25,000+ Papers per day.

Resource Utilization:

Resource Utilization in both the departments are drastically improved and managed to save the average of 1.5hrs per day per user.

Conclusion

As explained above, as part of the new project, with dynamically generated reports, has led to a saving of ~ 60 lakhs paper per year and ~680 hours per year.