**County Restoration: A Mat Cutting Business**

Glen Goodrich, Melissa Verrill, Scott Wood

**ABSTRACT:**  
In County A, Company B cuts mats for picture frames; the waste generated in its operations costs a significant amount to regularly haul to landfill. It was investigated whether alternatives to current business practices could be instituted to reduce the costs associated with waste transportation. It was recommended to the company that it burn the paper portion of its waste stream, with the potential to power a furnace system for the company in the process; in the long term, it is suggested that the company team with other businesses to advocate for the construction of recycling facilities in County A.

**PROBLEM STATEMENT:**  
A call was put out to revitalize a local county through a cohort of small environmental engineering projects. This design group sought out and selected, according to constraints, an engineering project with an environmental scope in nearby County A*, the completion of which would help to revitalize the county's flagging economy. Within County A request for assistance was received from a local picture mat-cutting Business B* whose current waste stream was generating large, recurring revenue losses for the business both in terms of stock product lost to manufacturing inefficiencies as well as the cost of removing waste product from the facilities.

After preliminary inquiry and consideration of possible design paths, a comprehensive problem statement was developed to guide the project:

"Restore economic health to the business community in County A via a comprehensive problem statement was developed to guide the project:"

"Restore economic health to the business community in County A via a comprehensive problem statement was developed to guide the project:"

**ORIENTATION:**  
A visit was made to the matcutting facilities in mid-February, 2011 to further assess the company's situation. The company specializes in custom-order, archival-quality mats for small-scale artist and gallery projects and ships internationally. The business handles three products specifically: cotton rag matboards, and the grey indicates the waste produced in Picture 3.

**RESULTS:**  
Results:

Considering available options versus metrics of cost-efficiency, simplicity, and operative sustainability, a short-term and long-term recommendation were developed for the company. In the short term it is recommended that the combustible portion of mat board - the standard core and cotton rag products - be amassed and burned in a controlled setting on premises to relieve the company of costs associated with landfill transportation of these products. The opportunity exists for the installation of a furnace system on premises as well, to heat the building with waste energy during winter months. Cotton rag in particular is excellent for this purpose, being dry and very free of chemical impurities.

In the longer term, it is recommended that Business B, preferably in partnership with other local businesses, pursue the first steps towards the construction of a recycling plant in County A. Available forms and grant applications can streamline the process for the end-user. If enough businesses express interest and demonstrate the financial gain to be had through the construction of new facilities, momentum on the project may be generated. New recycling facilities would provide a more profitable alternative to the burning or dumping of waste product.

---

*The business in question has requested that its identity be kept anonymous for the purposes of this project.*

**PROBLEM STATEMENT:**

A call was put out to revitalize a local county through a cohort of small environmental engineering projects. This design group sought out and selected, according to constraints, an engineering project with an environmental scope in nearby County A*, the completion of which would help to revitalize the county's flagging economy. Within County A request for assistance was received from a local picture mat-cutting Business B* whose current waste stream was generating large, recurring revenue losses for the business both in terms of stock product lost to manufacturing inefficiencies as well as the cost of removing waste product from the facilities.

After preliminary inquiry and consideration of possible design paths, a comprehensive problem statement was developed to guide the project:

"Restore economic health to the business community in County A via a comprehensive problem statement was developed to guide the project:"

"Restore economic health to the business community in County A via a comprehensive problem statement was developed to guide the project:"

**ORIENTATION:**

A visit was made to the matcutting facilities in mid-February, 2011 to further assess the company's situation. The company specializes in custom-order, archival-quality mats for small-scale artist and gallery projects and ships internationally. The business handles three products specifically: cotton rag matboards, and the grey indicates the waste produced in Picture 3.

**RESULTS:**

Results:

Considering available options versus metrics of cost-efficiency, simplicity, and operative sustainability, a short-term and long-term recommendation were developed for the company. In the short term it is recommended that the combustible portion of mat board - the standard core and cotton rag products - be amassed and burned in a controlled setting on premises to relieve the company of costs associated with landfill transportation of these products. The opportunity exists for the installation of a furnace system on premises as well, to heat the building with waste energy during winter months. Cotton rag in particular is excellent for this purpose, being dry and very free of chemical impurities.

In the longer term, it is recommended that Business B, preferably in partnership with other local businesses, pursue the first steps towards the construction of a recycling plant in County A. Available forms and grant applications can streamline the process for the end-user. If enough businesses express interest and demonstrate the financial gain to be had through the construction of new facilities, momentum on the project may be generated. New recycling facilities would provide a more profitable alternative to the burning or dumping of waste product.

---

*The business in question has requested that its identity be kept anonymous for the purposes of this project.*