**Evaluation of Potential Projects for Top-Flight Project Management, Inc.**

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**Introduction**

As the new project manager at Top-Flight Project Management, Inc., I have been assigned the task of evaluating three potential projects. The projects are as follows:

1. Build a Metropolitan Area Network (MAN) for the city.
2. Set up computers and networks for the County school district.
3. Build a housing network.

**Payback Period Analysis**

1. Build a MAN Network for the City:
   * Initial Investment: $10 million
   * Revenue:
     + $500,000 per month after the second year
   * Payback Period:
     + No revenue in the first year
     + Half revenue ($250,000/month) in the second year
     + Full revenue starting from the third year
   * Calculation:
     + Total revenue after the second year: $250,000 \* 12 = $3 million
     + Remaining amount to recover: $10 million - $3 million = $7 million
     + Payback period: 1 year (second year) + $7 million / $500,000/month = 1 year + 14 months = 2 years + 2 months

**Set Up Computers and Networks for the County School District**

* + Initial Investment: $1 million
  + Revenue:
    - $50,000 per month after the first year
  + Payback Period:
    - No revenue in the first year
    - Full revenue starting from the second year
  + Calculation:
    - Payback period: 1 year (first year) + $1 million / $50,000/month = 1 year + 20 months = 1 year + 8 months

**Build a Housing Network**

* + Initial Investment: $10 million
  + Revenue:
    - $450,000 \* 12 single-family residences = $5.4 million (one-time revenue after 2 years)
    - $70,000 per month for multifamily units after the second year
  + Payback Period:
    - Revenue from single-family residences: $5.4 million (after 2 years)
    - Remaining amount to recover: $10 million - $5.4 million = $4.6 million
    - Payback period: 1 year to build + 1 year to sell/fill = 2 years + $4.6 million / $70,000/month = 2 years + 65.7 months = 7 years + 6 months

**Recommendation and Evaluation**

Based on the payback period analysis, the project to set up computers and networks for the County school district has the shortest payback period (1 year and 8 months), while the housing network project has the longest payback period (7 years and 6 months).

**Pros and Cons of Each Project**

1. Build a MAN Network for the City:
   * Pros:
     + High monthly revenue after the second year
     + Long-term benefits and potential for expansion
   * Cons:
     + High initial investment
     + Delayed revenue generation
2. Set Up Computers and Networks for the County School District:
   * Pros:
     + Low initial investment
     + Quick payback period
     + Steady monthly revenue
   * Cons:
     + Moderate monthly revenue
3. Build a Housing Network:
   * Pros:
     + High one-time revenue from single-family residences
     + Steady monthly revenue from multifamily units
   * Cons:
     + High initial investment
     + Long payback period
     + Requires external funding

**Conclusion**

Given the analysis, I recommend pursuing the project to set up computers and networks for the County school district. This project offers a quick payback period, low initial investment, and steady monthly revenue, making it the most financially viable option. Additionally, it aligns well with our firm's capabilities and resources.