Staffing and Complex Project Coordination

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What to Consider Before Trying to Land A Company Changing Bid?

- Project Start Date
- Laboratory Capacity
- Method List - is new method development required?
- Accreditation – Are we certified, can we get certified?
- Project Scope
- Project Duration
- Large volumes of samples at a time or evenly distributed?
- Are we going to make money?
- What happens when the project is over?

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Lab Capacity

- Ideal situation is operating at 85% capacity.
- 85% gives a lab flexibility when employees are out, new hires are in training, instrument downtime, and the ability to add 15-20% of work from large projects.
- Labs cannot function long term running at 100%. A maximum of 3 months at 100% before employee burnout or instrument failures occur resulting in major setbacks and missed due dates.
- Example: Lab averages 5 million in sales per month. If managed properly they should be able to add a large project of 750K per month.
- Industry standard is 125K per employee in sales a year.

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Why not 100%?

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- Instrument failure will result in missed due dates/dissatisfied clients.
- Staff burn out will result in large turnover and decreased efficiency.
- Staff will not have enough time to properly train new employees, develop new instrumentation, maintain current instrumentation or improve techniques.
- Yes, you can see a short term profit increase but it is not sustainable long term.

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Types of Projects

- Emergency Response
  - Large spill that requires immediate testing
  - Lots of unknowns
- Planned (New Contracts)
  - Could be a couple of months or more away with fairly defined sampling schedules and sample volumes.

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Emergency Response

- Usually no time to add certifications or develop methods
- Often is rush work with short turn times, can the lab meet these turn times?
- Decisions have to be made swiftly
- Does it push the lab over 100% capacity?
- How long will the lab have to function at or above 100% capacity?
- Often high profile, expect litigation.

Short Term Capacity Increases

- Have your staff cross trained. Very seldom does emergency response work hit all the lab areas.
- Add 2nd or 3rd shift if these are not already utilized
- It's cheaper short term to pay out more overtime then to add employees
- New employees often slow down production and hinder performance for weeks if not months. Avoid adding new staff members for emergency projects if possible.
- Have a capable sub lab approved and ready incase things get out of hand.

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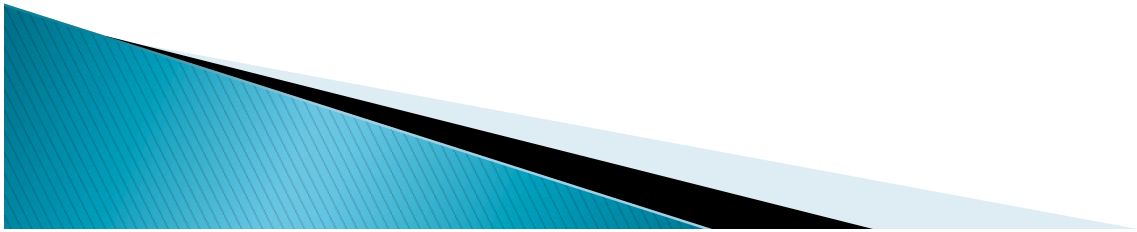
Other Things to Consider

- If the project will go on for a few months equipment may need to be added.
- Purchase used equivalent to what you have. Now is not the time for new equipment development. New equipment requires longer setup times, new capture programs, analyst training, etc. Buy something that can have an impact in 1 week or less.
- Example: VOC's needs more GC-MS capacity. All instruments Agilent 5973 systems. Buy another 5973 or a 5975 that can run the same software. Do not buy a different brand or a 5977 that requires mass hunter and long development.

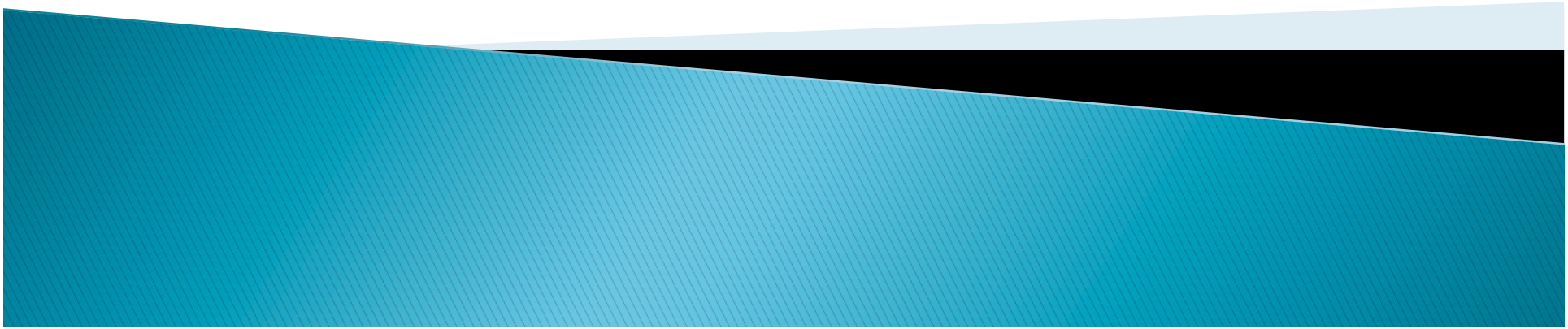


ER Means High Profile

- Press coverage and visibility is likely.
- Have a press management plan. Make sure press calls are identified and client/project information is kept confidential.
- ER work often requires long term storage of samples. This should be factored into the price.
- Segregation and storage of data for longer than normal periods.

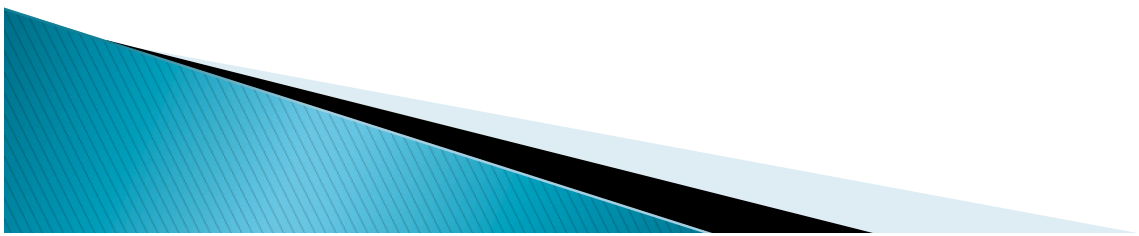
The Exit Plan

- Ideal situation is that the project lasted a few weeks or months and pushed the lab close to 100% capacity. The lab goes back to normal production and has made a tidy profit.
- If employees had to be added, company growth will need to occur. Otherwise profits will be impacted and staff reduction could be required.
- If instrumentation was purchased if can be resold on the used market or just simply shut off until a time it is needed again.



Being Ready for ER Work

- Maintain the 85% rule.
- Cross train as many staff members as possible. Get them used to learning new things and prepare them to be ready to jump in and help. Do not surprise them with it.
- Keep up with your capacity for each test.
- Have management meetings to discuss what would happen, be ready so opportunities are not missed.



Major North American Spills

- 12/30/13 North Dakota train collision 400400 gallons
- 8/25/13 North Dakota pipeline spill 865000 gallons
- 7/6/13 Train Derailment in Quebec 1.5 million gallons
- 7/26/10 Kalamazoo River spill 1 million gallons
- 4/20/10 Deepwater Horizon gulf spill 193 million gallons
- 7/28/08 New Orleans 2.7 million gallons
- 6/19/06 Citgo Refinery LA 2 million gallons
- 8/30/05 Hurricane Katrina related spills 7.3 million gallons
- 3/14/1911 Lakeview gusher 378 million gallons

New Contract

- Usually 1-5 year project bids
- Sampling often occurs months after the bid process.
- There is time to develop methods and add certification
- Follow the same 15 rule
- Due to the long duration of testing employees and equipment may be necessary to reduce burnout.

Where Do Most Large New Contracts Come From?

- Most major clean up sites go up for bid every 1-5 years
- Former Landfills
- Superfund sites (Example: Hudson River)
- Former military bases (DoD work)
- Industry (Automotive, Utility Companies, ETC)
- Large ER sites that require continued testing after the initial clean up.

Equipment

- With new contracts you have time to develop new equipment and do not necessarily have to have instant impact.

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The Dangers of Large Contracts

- While adding 15% growth to your company with one contract is appealing. It also has it's risks.
- These contracts are extremely competitive and have low margins.
- If your lab does not continue to grow or sees a decrease in sales the large contract has greater control over the lab.
- Most contracts have auto renewals after a set number of years. Often the client comes back with lower price demands at this point.

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The Dangers of Large Contracts

- With 15% of the company tied to 1 contract is becomes very difficult to walk away.
- Results could be drop in stock value.
- Not walking away keeps top # up but profits suffer and the end result may be a larger negative impact on the company down the road.

Counteracting the Negatives

- Most large bids are on a 3 year renewal. This gives time for growth.
- Ideally you want that contract that is 15% of your company at the time of bidding to be less then 5% by the time of the renewal.
- Projects end, sites close, funding runs out, labs are always fighting for the next project.

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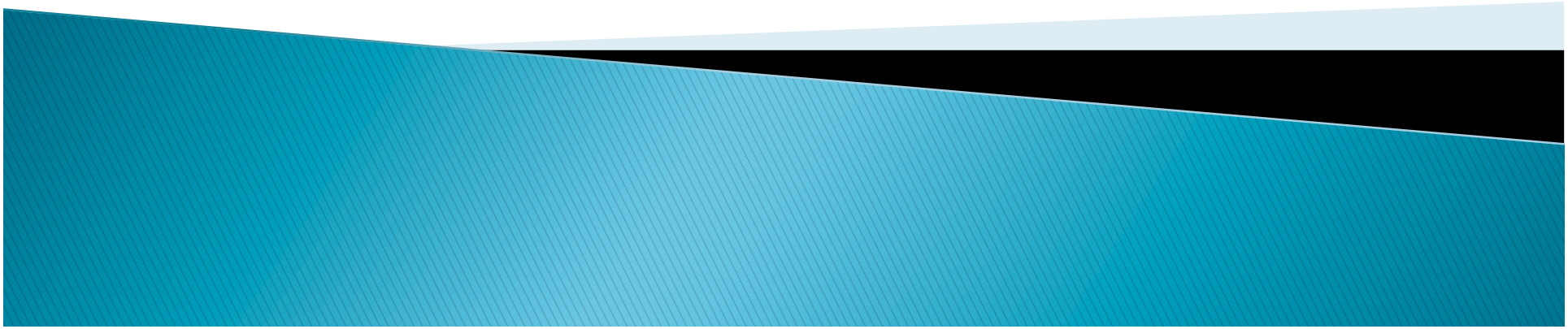
The Exit Plan

- If you are not in a position were you can walk away at the renewal period you will be forced to sign for lower prices
- When a large project ends companies may face staff layoffs.
- Instrumentation purchased specifically for this project may no longer be needed or may not be needed for an extended time.



Conclusion

Proper Planning and Management of Large Projects Helps Insure Success and Sustainability

Thank you for your time!

PIONEERING GREEN INITIATIVES WHILE PAVING THE WAY FOR OUR INDUSTRY!

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"ESC……Saving the environment, through innovation, one method at a time"

Any Questions ?