15.963 Management Accounting and Control
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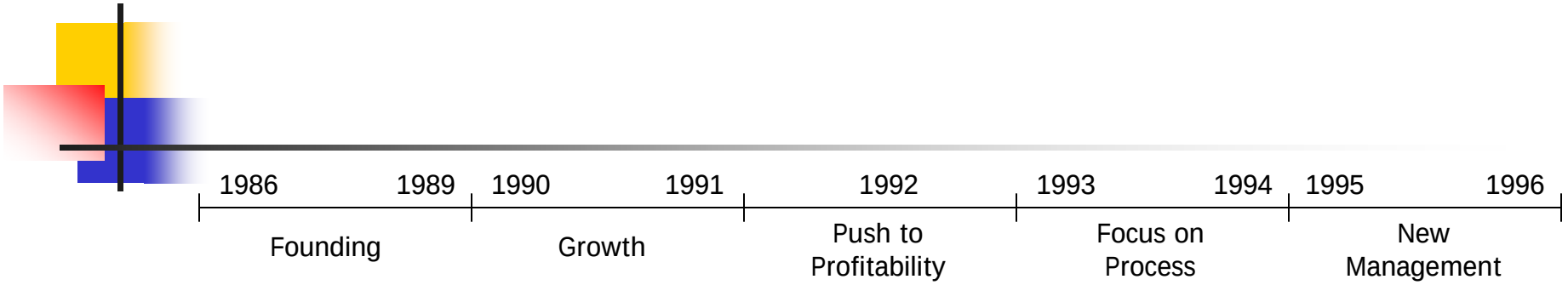
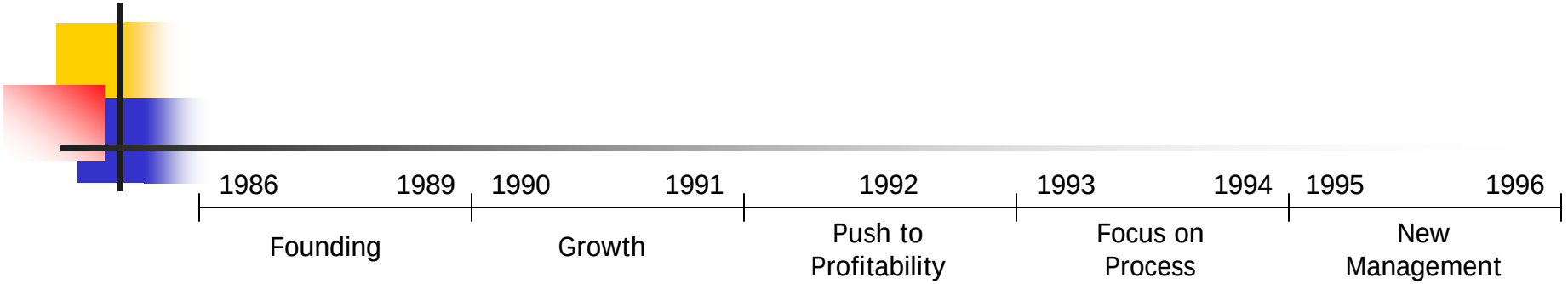
ATH: Chronological Stages



ATH: Chronological Stages



ATH Achievements

- developed new product
- capitalized new venture

- attracted new capital
- earn-out plan
- built market share

- 4 X Revenues
- first profit
- rewarded all employees

- developed a vision
- customer focused measures
- sales and earnings growth

- $60 million sales
- 52% gross margin
- $102 million assets
- $60 million accumulated R&D investment

ATH Technologies

- We trace the evolution of ATH through five stages.
- What is the competitive environment?
  - The business is technology driven.
  - Technology is evolving rapidly, so product life cycles are likely to be short.
  - Product development pipeline is critical.
- What do you think of Scepter's decision to purchase ATH?
  - Did they earn an appropriate return on investment?
    - The total price, if all earn-out conditions are met, is probably around $150m in 1990 dollars, after discounting at about 18%.
    - The target income for 1994 is $24m. This would need to grow substantially, and for a long period, in order to earn an appropriate ROI.
    - Is this likely given short product life cycles?

ATH Technologies

- Was this a poor investment decision?
  - There may have been non-financial considerations such as
    - access to new technologies and markets,
    - expansion of product portfolio, and
    - first mover advantages.
  - However, the laissez-faire approach of Scepter after the purchase does not suggest the presence of operating synergies between Scepter and ATH.
  - Was this a poor outcome, as opposed to a poor decision?
    - Perhaps, but was the earn-out structure appropriate?
    - i.e., did Scepter overpay for ATH, and
    - did the earn-out structure provide the right incentives from Scepter's perspective?

ATH Technologies

- Consider each component of the earn-out plan.
- $24m for FDA approval.
  - This is necessary, but should more have been contingent on approval and less paid up front?
    - Perhaps FDA approval was highly likely – the uncertainty was not about the technology but about the effort required to bring it to the stage necessary for approval.
- $25m for independent confirmation of superiority of technology.
  - If the technology can be appropriated, replicated or substituted, then investment unlikely to be recovered.
    - Remember from our calculation that payback period is long.
  - Should this be tied to any other part of the earn-out plan?
    - It should probably be tied to the next $90m.
    - It should probably also have been tied to the initial $60m.

ATH Technologies

- $90m for three year sales and earnings goals.
  - Should this be independent of the $25m incentive?
  - Is it too rich, given the earnings goals? Recall our earlier calculation.
  - Is the incentive period too short?
    - There will be a severe horizon problem, and behavior may be excessively myopic given the richness of the payoff.
  - Should the sales and earnings goals be independent?
    - One provides incentives to sell, and the other to control costs.
    - On one hand, if sales are sustainable then it may be appropriate to reduce the emphasis on short-run profitability and delink the sales and earnings goals.
    - On the other hand, the independence of the two goals effectively says: we do not care about profits if you achieve sales goals. Is this the right message?

ATH Technologies

- Should the earn-out formula be solely output-based?
  - Consider the input → process → output representation.
  - Processes are important for the long run viability of the organization, which is presumably what Scepter wants.
  - Output-based formulas are 'hands-off' and allow a lot of independence.
  - An absence of process controls (i.e., a process-based formula) is especially risky in this business.
    - The FDA could shut them down.
    - Litigation is likely if equipment malfunctions or leads to faulty diagnoses, since Scepter has 'deep pockets.'
    - Reputation costs are high – poor quality may be an irredeemable failure.

ATH Technologies

- So why are process controls absent?
  - One reason is the perception that controls stifle innovation.
    - E.g., Universities, Berkeley, Kodak
  - Another reason is the threat of litigation if managers are impeded in meeting their earn-out targets.
    - This is akin to the litigation threat faced by creditors if covenants are too tight.
  - However, does this mean there should be no process controls?
    - Some process controls are probably optimal.
- What process controls could have been installed?
  - The new product pipeline should have been audited.

ATH Technologies

- Reports on customer satisfaction, quality and adherence to FDA regulations should have been generated.
- A long term profit plan should have been developed, and incentives built around this.
- The annual budget, including R&D and marketing expenditures should have been negotiated.

- In the growth phase,
  - Was ATH buying market share at the expense of profits?
  - Was there a short run / long run tradeoff perhaps?
  - Should there have been some controls on discretionary expenditures?

ATH Technologies

- In the push to profitability:
  - Strong incentives – 20% bonus plus 2 tickets to Hawaii – were offered if profit plans were achieved.
  - Are you surprised that Casper is dismayed when the FDA letter arrives?
    - "The same people who had been so thankful and committed had put the division on the brink of disaster!!"
    - Employees are not inherently good or bad. They just respond to incentives.
    - But the incentive system told his employees to focus on profit only. It said nothing about quality, and managers did not communicate the cost of poor quality.
    - The result should have been predictable, given the strength and unidimensionality of the incentive.

ATH Technologies

- The focus on process phase:
  - This phase was predictable even when the previous phase was initiated.
  - Typically, output failures direct attention towards processes.
    - Companies respond by removing decision rights and imposing Standard Operating Procedures (SOP).
    - This takes away the benefit of local employee knowledge.
  - In this case, no SOP's were imposed, but process controls were introduced.
    - A Vision Statement was prepared. However, these are meaningless if incentives are not aligned with them.
    - Financial measures were balanced with non-financial measures.

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- New management phase:
  - Founders and other managers cashed out.
  - Sales began a precipitous decline.
    - The channel had been stuffed in the last quarter of 1994. Remember Sunbeam and Chainsaw Al?
  - The company was a shell.
    - Existing products were old.
    - New product pipeline was empty.
    - Knowledge was lost when old management team left.
  - ATH was blindsided by the competition, because it's focus was inwards.

ATH Technologies

- Takeaways:
  - divergent behaviors are predicted in the absence of control systems;
  - control is more challenging where creativity and innovation are critical, and will generally be weaker in this environment;
  - However, control and fostering creativity are not mutually exclusive. There is still room for qualitative measures, non-financial measures, milestones based on long term plans, and negotiated budgets;
  - formal control systems should monitor inputs, processes and outputs. Input and process controls are more timely than output controls in flagging problems;
  - If long run viability is the goal, short run incentives must be balanced with long run incentives, and input and process controls are more important.

Control Systems

- Important control features in standard costing systems include:
- The materials price variance is isolated at purchase and recorded in a separate account. Materials inventory is debited at (actual quantity x standard cost per unit).
- This serves two purposes: (i) it makes the variance salient in a timely fashion, and (ii) it insulates downstream users (production) from this variance which they lack control over.

Control Systems

- The materials quantity variance is isolated and recorded in a separate account at the time materials are requisitioned by production. Work-in-process inventory (WIP) is debited at standard price per material unit x standard quantity per output unit x actual number of output units.
- Similarly, labor price and quantity variances are isolated and recorded in a separate account when labor is used. WIP is debited at standard wage x standard hours per output unit x actual number of output units.