

Value Chain Management Capstone

Welcome & Introduction

Joe Bradley

Today's Outline

Syllabus & Navigating Canvas

Course Information and Expectations

Assignments and Deliverables

Q&A

About Me

Industry Background

Consumer Products (Home Products)

Software (CAD/CAM)

Military & Defense (R&D/Transportation)

Transportation Policy (Technology Management & Strategy)

Co-founder - Sun Buckets, Inc.

(www.sunbuckets.com)

Academic Background



B.S.E Aerospace Eng. (Michigan)

M.S Mechanical Eng. minor in Electrical Eng. (Iowa State)

MBA (Illinois)

PhD Industrial and Enterprise Systems Eng. (Illinois)

Faculty – Grainger Engineering (BioE), Carle Illinois
College of Medicine, Gies College of Business

Course Information

General Information

Syllabus Overview

Project-Based Course (Case-study)

Individual & Team assignments

Pass/Fail

Course Structure

Capstone is structured differently from core specialization courses:

Course is 2 weeks in duration

Limited introduction of new materials

Application of previous learning

Course Assignments

3 assignments to complete

Analysis and Decision (4 parts)

Reflection Essay

Team Final Presentation (3-4 minute video)

Final Slide Deck



Course Assignments

Category	Assignment	Point	Percent
Individual Assignments	Assignment 1: Analysis and Decisions	40	40%
	Assignment 3: Reflective Essay	10	10%
	Team Evaluation	5	5%
Group Assignments	Assignment 2: Final Capstone Slide Deck	30	30%
	Final Video Presentation	15	15%
	Total	100	100%

Course Assignments Policy



No late submission policy

Individual assignments to be done independently

Course Expectations

Engage with Teaching Team (forums, Q&A, etc.)

Engage with Classmates

Complete the Assignments

Attend Live Sessions

Attend Office Hours

Q&A



Any Questions or Concerns

Example

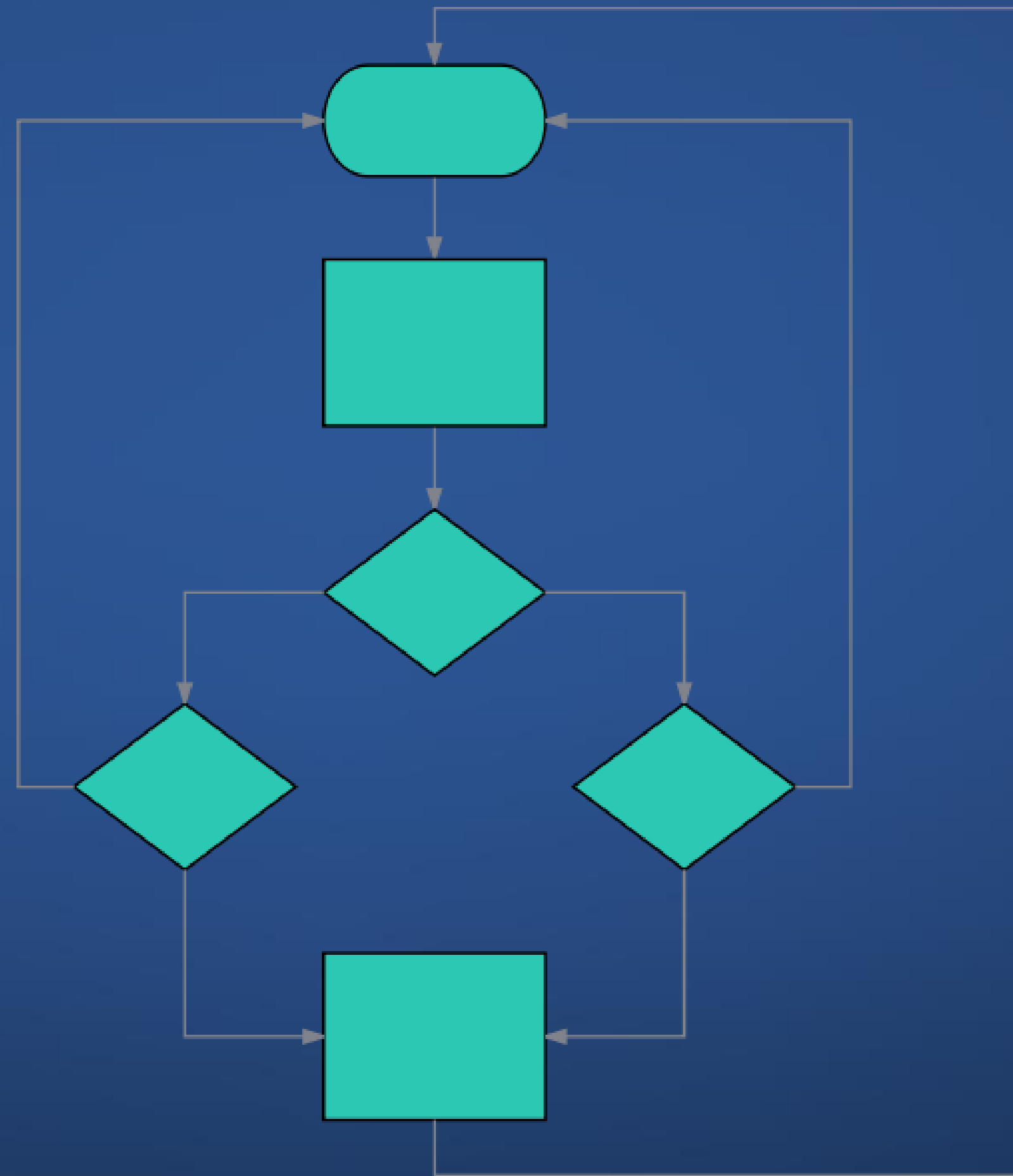


Assignment 1 – Example Calculation and Analysis

Construct a Decision Model



Should embed both
qualitative and quantitative
factors



I

Calculate Required Values

Parameter	Calculation
Working Capital (WC)	Receivables + Inventory – Acct. Payables
Invested Capital (IC)	WC + Property, Plant, and Equipment (PPE)
Asset Turnover (AT)	Sales/IC
Operating Margin (OM)	Operating Profit/Sales
Tax Rate	Corporate Tax Rate (35%)
Return on Invested Capital (ROIC)	OM x AT x (1-Tax Rate)

Balance Sheet (000's)	
Assets	
Receivables: Less Allowances	3563
Inventory	4791
PPE	20,124
Liabilities	
Accounts Payable	1671

DATA SHEET

Product No.	Y1 Sales (000's)	Y2 Sales (000's)	Y3 Sales (000's)	Net Price	Profit/unit
XYZ123	262	221	205	\$43.50	\$14.50

$$\underline{WC} = 3563 + 41791 - 1671 = 6,683,000$$

$$\text{Tax Rate} = 35\%$$

$$\underline{IC} = 6,683,000 + 20,124,000 = 26,807,000$$

$$AT = \frac{(43.50)(230,000)}{26,807,000} = .37$$

$$OM = \frac{(230,000)(14.50)}{(230,000)(43.50)} = .333$$

$$ROI_c = OM \times AT \times (1 - \text{Tax}) = .33 \times .37 \times .65 = \underline{\underline{.079}}$$

General Steps

Construct a Decision Model

Calculate Required values (WC, OM, ROIC, etc.)

Make Product Decision (Delete, Keep, Wait & See)

*Consider both quantitative and qualitative
information/data