Designing job cost code structures for effective cost management

Craig Davied, Grant Thornton

Session # P-049350

About Me

Craig Davied
Managing Director, Transformation
Kansas City, MO
craig.davied@us.gt.com

Education

B.S. - Business Administration / Finance
Kansas State University

Executive summary

Craig is a Managing Director with Grant Thornton in the Technology Transformation practice. He has over 27 years of consulting experience, across a diverse set of companies and industries. Craig's experiences include planning and program management of multi-faceted implementation projects, hands on management and implementation of ERP software packages, business process reengineering and system architecture design.

Prior to Grant Thornton, Craig was a founding member of MarketSphere's JD Edwards practice in 2002 and was responsible for managing and delivering projects, practice development, solution design and staff management. He has deep experience with the processes and configuration of the JDE Finance and Distribution modules, specifically with the General Ledger, Accounts Payable, Accounts Receivable, Job Cost, Contract Billing, Procurement / Subcontracts, Sales, Inventory, and Advanced Pricing. Craig also has experience with multiple releases of the software. Prior to joining Grant Thornton Consulting from MarketSphere, Craig was an experienced consultant in a "Big 5" consulting organization and has over 20 years of professional experience.

Industries

- Consumer products
- Retail
- Metals and mining
- Mineral exploration drilling
- Construction
- Water management
- Aggregates
- Pet food/manufacturing
- Textiles
- Public utilities
- Inbound / outbound Transportation

About Grant Thornton

Grant Thornton is one of the world's leading organizations of independent assurance, tax and advisory firms. These firms help dynamic organizations unlock their potential for growth by providing meaningful, actionable advice through a broad range of services. Proactive teams, led by approachable partners in these firms, use insights, experience and instinct to solve complex issues for privately owned, publicly listed and public sector clients.

GLOBAL*	UNITED STATES*
72,858 people	9,772 people
135+ countries	46 offices
$7.45 bn revenue	$2.34 bn revenue

*Global refers to Grant Thornton International Ltd (GTIL) member firms (statistics as of Sept. 30, 2023). United States refers to professionals in Grant Thornton LLP, Grant Thornton Advisors LLC and GT US Shared Service Center India Private Limited and Grant Thornton Knowledge and Capability Center India Private Limited, both affiliates of Grant Thornton LLP that provide services to Grant Thornton LLP and Grant Thornton Advisors LLC (statistics as of Dec. 31, 2023) . All revenues listed are USD.

GRANT THORNTON U.S. KEY STATISTICS

Fortune 100 companies served

Fortune 500 companies served

Fortune 1000 companies served

UNIVERSAL CAPITAL MARKETS ACCEPTANCE

Top 5 firm

(2011 - Present)

- for number of commercial IPOs completed
- commercial IPOs for companies with $500 million or more in market cap

100%

of the top underwriters have completed IPOs with us

Our Oracle practice

ERP and SCM

Financials | Revenue management | Accounting hub | Project accounting | Risk management | Project execution
Procurement | Inventory management | Cost management | Maintenance | Manufacturing | Order management | Product lifecycle and data management | Supply chain collaboration and planning

EPM Analytics

Planning and budgeting | Profitability and cost management | Financial close and consolidation | Tax reporting and provisioning
Management and operational analytics | Narrative reporting | Account reconciliation | Enterprise data management

HCM

Culture journey | Talent acquisition | Workforce administration | Talent management | Workforce development
Alumni network

Data governance & cloud integration

PaaS

Solution delivery center (off-shore and on-shore)

Industries

Construction, Real Estate & Hospitality	Consumer And Industrial Products	Energy	Financial Services	Healthcare And Life Sciences	Not-For-Profit Organizations	Private Equity	Public Sector	Technology

About Grant Thornton JDE

JD Edwards practice – 80+ dedicated professionals in U.S.

Project management and functional expertise

- Specialized functional resources
- Project management office
- Implementations
- Upgrades
- Mobile applications
- Third party integration architecture
- Business process re-engineering
- Managed services (functional)
- User materials and training
- Financials
- Distribution
- Manufacturing
- HR / Payroll
- CAM
- Project advisory

Technical

- CNC
- Development
- Workflow
- Security management
- Technical management
- Database management
- Infrastructure / hosting
- Managed services (technical)
- Private cloud
- Disaster recovery
- Security
- Development (FRICE)

Trusted business advisor

- Gap assessment
- Transformation
- Industry point of view
- Proven methodologies
- Process excellence
- Benchmarking
- ERP governance
- Data governance
- Master data management
- Reporting strategy
- Change management
- Cloud roadmap / strategy
- FASB planning
- Chart of accounts optimization

Oracle leadership

- The Leading Oracle Platinum Partner presenter at COLLABORATE, INFOCUS and OpenWorld conferences (more presentations than any other Platinum partner in the past 3 years)
- Featured in PROFIT magazine – JD Edwards Special Issue
- Teaming with JDE product development – we work with JD Edwards on enhancing the code base for customers (e.g. OneView Reporting, Revenue Recognition, Leasing Standards, Configurator

Experience and recognition

- More than 250 JD Edwards implementations and upgrades as a practice
- Over 20 implementations in the past 5 years
- Over 50 upgrades in the past 5 years
- 2017 JD Edwards Partner Excellence Award for **User Adoption**
- 2016 JD Edwards Partner Excellence Award for **Vertical Industries**
- Oracle JD Edwards recognized Grant Thornton with its 2014 and 2015 JD Edwards Partner Excellence Award for Outstanding **Upgrades**

Job cost agenda

1. What is job cost?
2. Job setup
   - Job master
   - Job accounts
3. Cost code structures
4. Job budgets
5. Job commitments
6. Job status inquiry
   - Roll-up capabilities
   - Inquiry columns
   - Display options
8. Job cost reports
9. Job maintenance
   - Field progress entry
10. Profit recognition
    - Journal entries
11. Job closing
12. Job cost system setup
13. Project costing related modules

What is project management?

A project is a series of tasks that need to be completed in order to reach a specific outcome.

Project management is the application of processes, methods, skills, knowledge and experience to achieve specific project objectives according to the project acceptance criteria within agreed parameters

Project management has final deliverables that are constrained to a finite timescale and budget.

What is job cost?

Job cost is a means of tracking costs and revenue on a per job / project basis. Specifically, we are able to perform the following:

- Create and maintain cost code structures for all jobs
- Establish job budgets
- Set up time schedules for job tasks.
- Track and manage the costs and revenues associated with projects, individual jobs, and/or change orders
- Review and revise additional information associated with projects and/or jobs.
- Generate various reports showing the cost, revenues, and other details of projects and/or jobs.
- Calculate job progress at any time during the job.
- Calculate estimated final values associated with projects and jobs.
- Recognize and record profit or loss at any point in a job.
- Create draw reports on the costs that are eligible to be borrowed against a loan agreement.

Definition of a job/project

- A job is a consolidation of costs and/or revenue which are tracked against a targeted gain/loss

- A project is a set of related jobs linked within the job cost codes. The linking will allow for rollup reporting created through a parent child relationship

Project accounting guiding principles

- Need to capture all direct and/or substantial costs within a job in order to understand true profitability.

- Need to arrange cost code structures, also known as work breakdown structure (WBS) to allow for optimal cost (budget, actual, and estimate at complete) analysis throughout the life of the job in order to foresee job changes as soon as possible.

Job cost / financial COA relationship

Balance Sheet		
Object	*Description*	*LOD*
10000	Assets	3
11000	Current Assets	4
11500	Work in Process	5
11510	WIP: Materials	6
11520	WIP: Labor	6
20000	Liabilities	3
21000	Current Liabilities	4

Jobs typically reside on the balance sheet…

Job #100

Cost Code	*Cost Type*	*Description*	*LOD*
100000		Pre-Construction	3

Job #101

Cost Code	*Cost Type*	*Description*	*LOD*
100000		Pre-Construction	3

Job #102

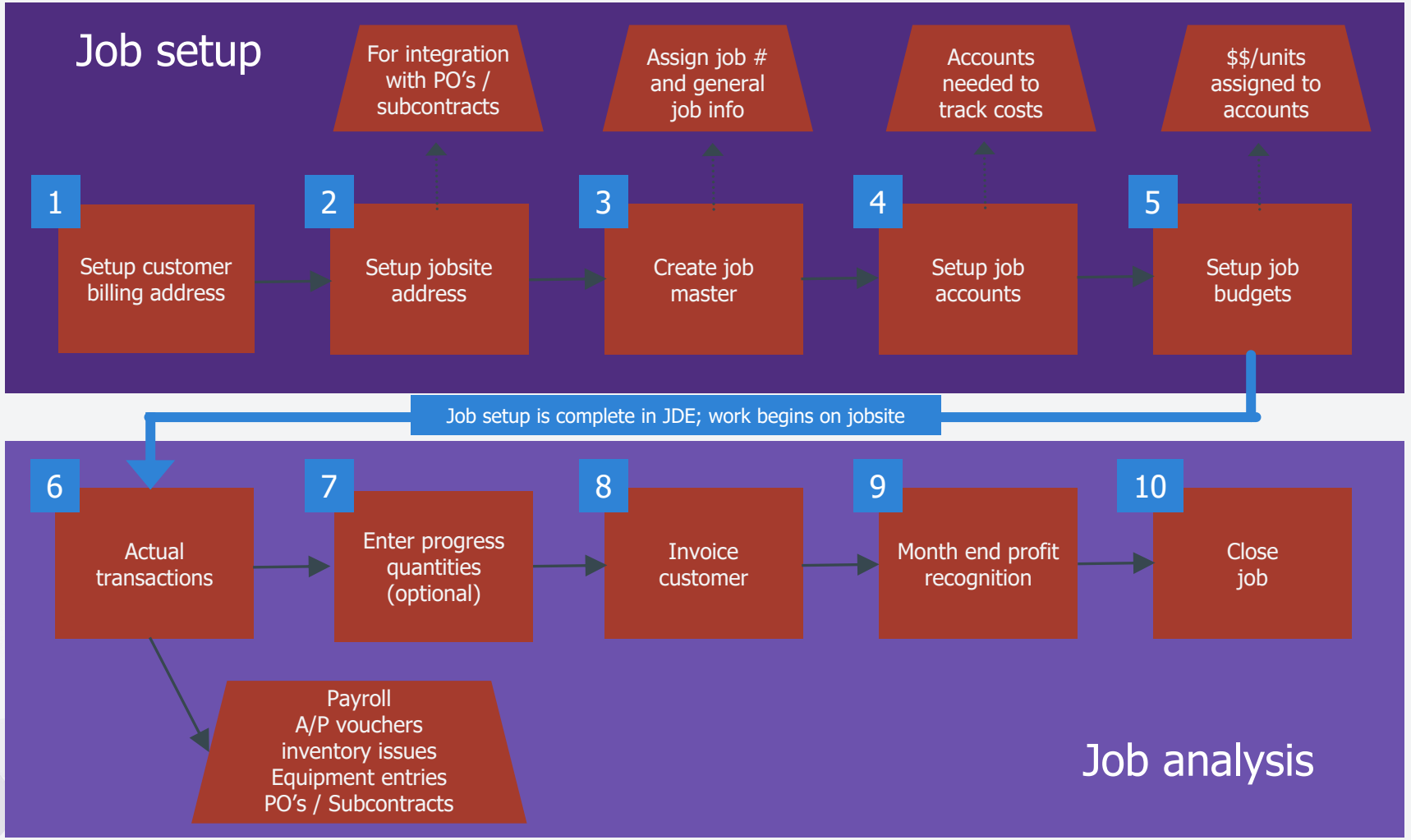
Cost Code	*Cost Type*	*Description*	*LOD*
100000		Pre-Construction	3
110000		Design	4
110500		CAD Drawings	5
110500	11520	Labor	8
110600		Estimating	5
110600	11520	Labor	8
200000		Build	3
210000		Project Mgmt	4
210000	11520	Labor	8
210000		Installation	4
210000	11520	Labor	8
250000		Products	3
251000		Equipment	4
251000	11510	Materials	8
252000		Supplies	4
252000	11510	Materials	8
253000		Disposables	4
253000	11510	Materials	8
900000		Financials	3
910000		Job Billings	4
910000	90000	Billings	8
950000		Job Adjustments	4
951000	95000	Cost in Excess	8
959200	96000	Billings in Excess	8
990000	99900	Job Offsets	8

…and are "recognized" on the income statement periodically.

<u>Note</u>: Jobs can reside on the I/S or other locations if necessary

Income Statement		
Object	*Description*	*LOD*
40000	Revenue	3
41000	Contract Revenue	4
42000	Contract Sales Adj	4
50000	Expenses	3
51000	Contract COGS	4
52000	Contract COGS Adj	4
70000	S, G & A	3
71000	S, G & A Detail	4

Job cost process



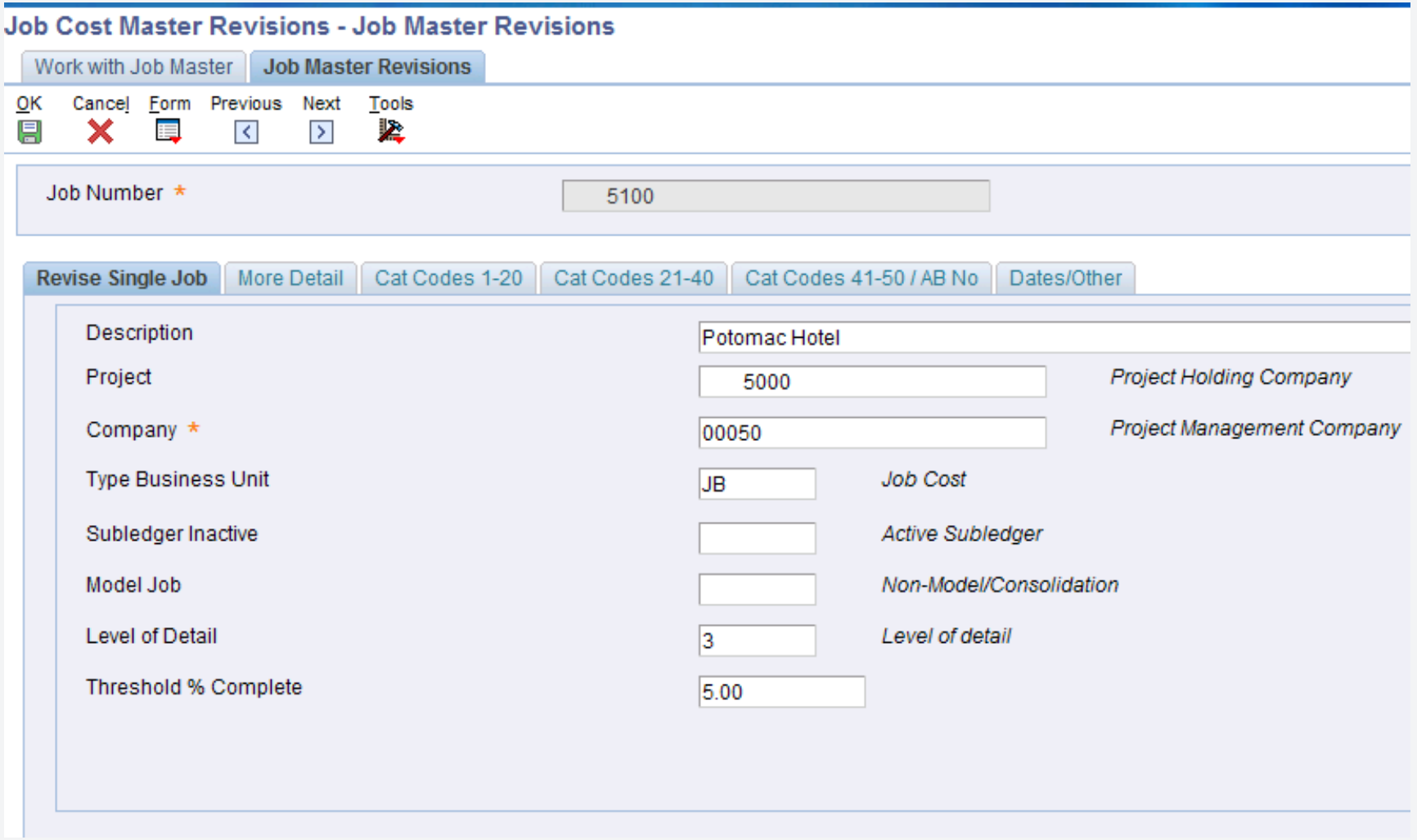
Job master setup

Setup job master

- Type of business unit
- Extended job master

Key information

- Job number
- Job description
- Company
- Posting edit code
- Jobsite address
- Customer billing address
- Dates
- Category codes



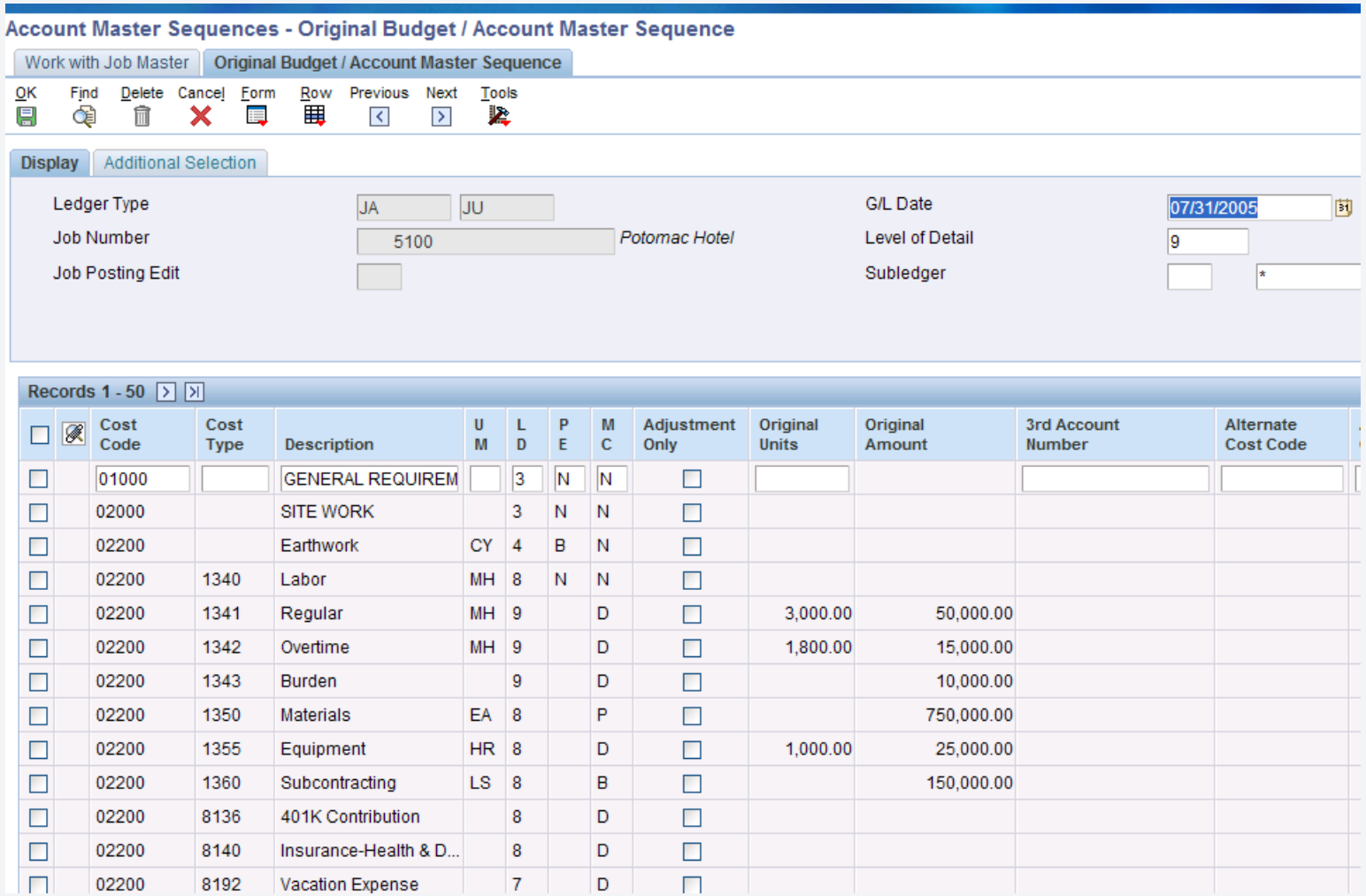
Job master setup

Setup job accounts

- Cost code structures
- Cost code / cost type
- Account description
- Alternate cost code
- Posting edit code
- Level of detail
- Unit of measure
- Method of computation
- Category codes

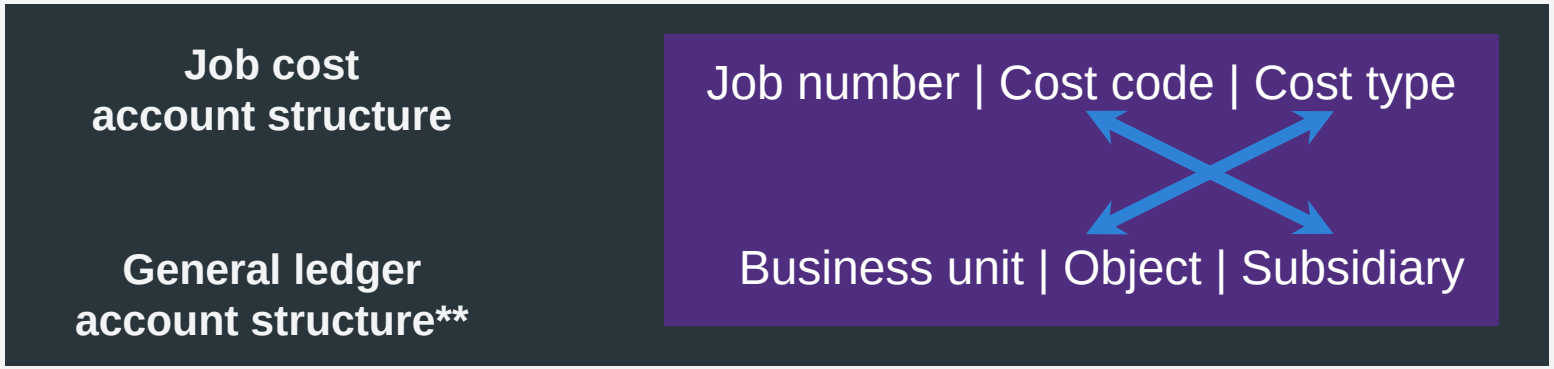
Other account setup methods

- Copy from chart type
- Copy from job
- Export / import



Cost Code	Cost Type	Description	U M	L D	P E	M C	Adjustment Only	Original Units	Original Amount	3rd Account Number	Alternate Cost Code
01000		GENERAL REQUIREM		3	N	N					
02000		SITE WORK		3	N	N					
02200		Earthwork	CY	4	B	N					
02200	1340	Labor	MH	8	N	N					
02200	1341	Regular	MH	9		D		3,000.00	50,000.00		
02200	1342	Overtime	MH	9		D		1,800.00	15,000.00		
02200	1343	Burden		9		D			10,000.00		
02200	1350	Materials	EA	8		P			750,000.00		
02200	1355	Equipment	HR	8		D		1,000.00	25,000.00		
02200	1360	Subcontracting	LS	8		B			150,000.00		
02200	8136	401K Contribution		8		D					
02200	8140	Insurance-Health & D...		8		D					
02200	8192	Vacation Expense		7		D					

Job cost vs. G/L



The account structures are related as follows:

- Job number = Business unit (aka "Cost center")
- Cost code = Subsidiary
- Cost type = Object

The cost code identifies a specific activity within the job.

The cost type identifies specific costs, within the activity, such as labor or materials.

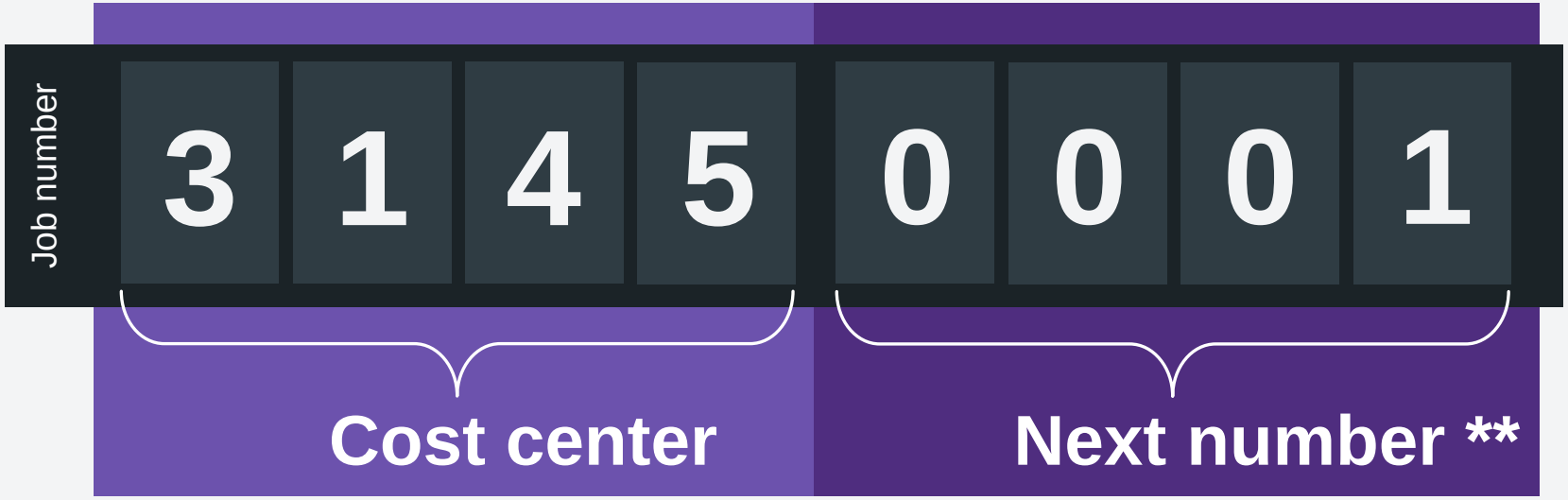
If necessary, the subledger is another field available to further segregate costs (used with change orders).

** - General ledger accounting structure is utilized for journal

Job cost database structure

Data type	Data file	Description
Job master	F0006	Stores job master info
Account master	F0901	Stores cost code structure info
Account balances	F0902	Stores account balance details related to the various ledgers associated with each account in your cost code structures
Account ledger	F0911	Tracks revisions to account balance amounts and quantities by providing a detail audit trail of transactions

Job number



Cost code structures

Header vs. detail accounts

Header account

- An account into which corresponding detail accounts can be summarized
- Can also be used to summarize related cost code headers, depending on the level of detail
- Only has a job number and a cost code

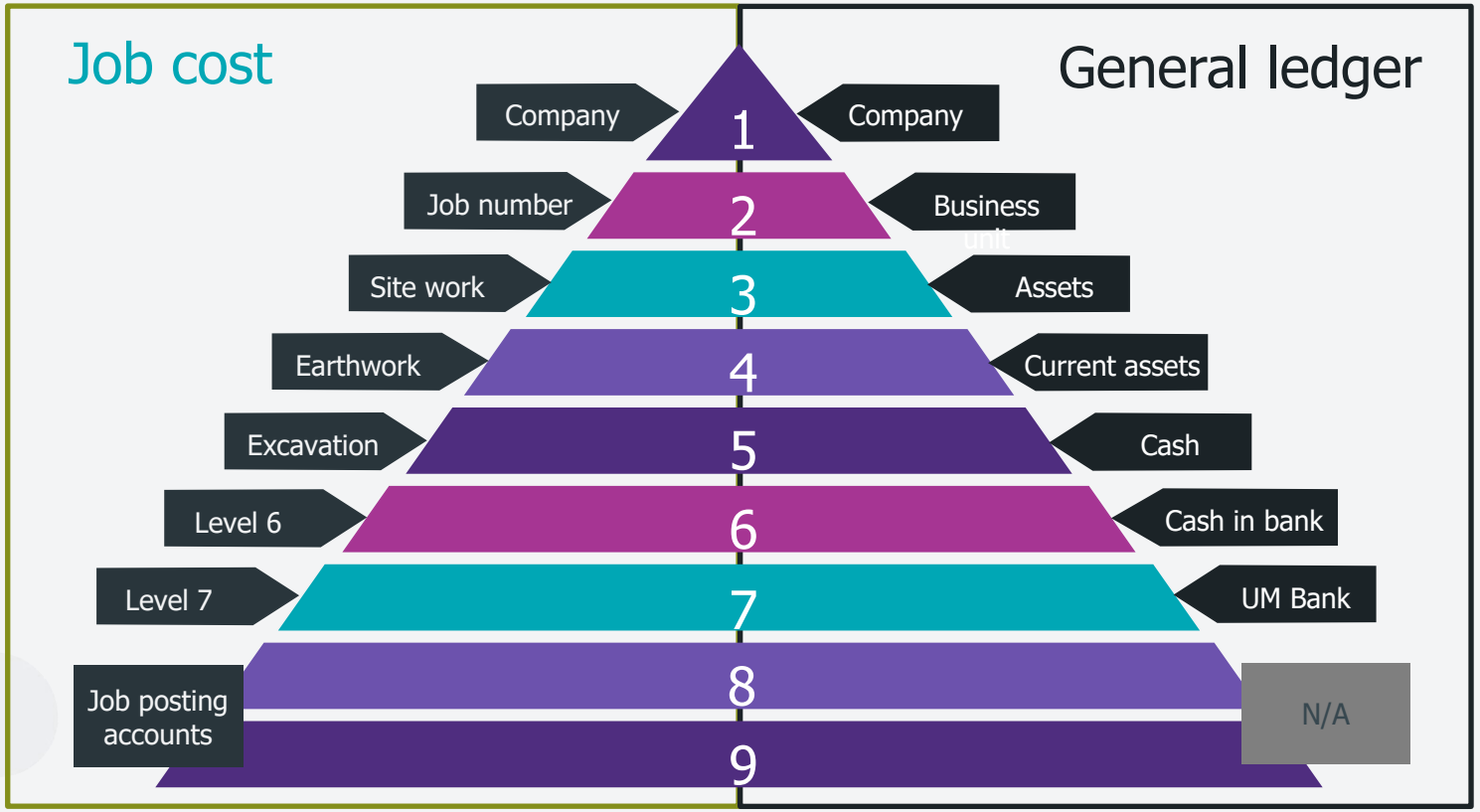
Detail account

- An account that is defined down to a specific cost type
- Contains a job number, cost code, and a cost type

LOD	Cost code	Cost type	Account desc
3	1000		Sitework
4	1100		Earthwork
5	1110		Surveying
8	1110	1420	Labor
8	1110	1430	Materials
5	1120		Excavation
8	1120	1420	Labor
5	1130		Trenching
8	1130	1420	Labor
8	1130	1430	Materials

Cost code structures

Level of detail / hierarchy



Cost code structures

Key questions to answer

- How do I estimate the work to be completed? What system do I utilize?
- How do I manage the costs on my job? Remaining activity?
- What cost data informs me of future adjustments to make?
- How do I measure the performance of my:
  - Estimators?
  - Project managers?
  - Supervisors, Foreman, Laborers, etc.?
- How do I measure the performance of my division? Product line? Company?
- How do I forecast cost and revenue for future years?
- Am I able to analyze costs effectively to recognize costing trends?

Cost code structures

Cost types

Relationship to COA B/S WIP Accts

Used to further define the costs associated with the accounts in your cost code structure

Typical questions to ask when determining if a cost type is necessary:

- "Is this type of cost utilized in multiple cost codes / activities within a job?"
- "How do I usually group my cost type information for review?"
  - Financial cost types:
  - Job billings
  - Revenue recognized
  - Cost recognized
  - Over / under billings

Cost type	Description	P/E	LOD
1420	Direct labor	B	8
1421	Field labor		9
1422	Office labor		9
1423	Field fringes		9
1424	Office fringes		9
1430	Direct materials		8
1440	Equipment - Internal		8
1445	Equipment - External		8
1450	Subcontractors		8
1455	Consumables		8
1460	General supplies		8
1480	Travel		8
1481	Meals & entertainment		8
1482	Utilities/rents/phones		8
1483	Bonds & insurance		8
1484	Commissions		8

Cost code structures

Header units

LOD	Cost code	Cost type	Description	U/M	Budgeted units	Budgeted dollars
3	10100		Major activity	LF		
4	10000		Sub activity	LF	**3000**	$1000
8	10000	1420	Labor	MH	50	
9	10000	1421	Salaried labor	MH		
9	10000	1422	Hourly labor	MH		
9	10000	1423	Fringes	LS		
8	10000	1430	Direct materials	LF	3000	$25,000
8	10000	1450	Subcontracts	LS	1	$10,000

Header account

Detail account

Header units - Overall quantities to complete

Detail units - Units by cost type, related to the detailed transaction

Key aspects:

- Specific header and all detail accounts are linked because cost code is consistent between them
- Header accounts are available for level of detail 3 through 7

Cost code structures

Developing standards

- It is important to develop your entire Code Book for all WBS activities that you think you might ever encounter
- Utilize the Chart Types functionality in order to store subsets of your code book as templates, typically broken down by (for example):
  - Type of jobs
  - Product lines
  - Industries
- Assign numeric values to each cost code; Make sure to have gaps built into your numeric sequences for future growth
- Remember you have up to 8 digits available for your cost code numeric values
  - Make sure to use a large enough string to allow for proper spacing / future growth, but don't forget that all users of this information will need to enter/record this information on numerous forms and/or documents, so be careful not to add needless keystrokes…

Cost code structures

Ledger types

- Ability to track units, as well as dollars
- Ability to lock original budgets, yet have revised budgets accumulate
- Projected finals are a separate ledger type
- Ability to track purchasing and subcontract commitments
- All ledger types are available for Job Status Inquiry column definitions as well
- Opportunity to have additional "custom" ledger types for other job-related purposes

Ledger type	Amounts	Units
Actual	AA	AU
Budget – original	JA	JU
*Budget – revised	RA	RU
Commitments	PA	PU
Projected final	HA	HU
Field progress (Force)	FA	FU
% of job complete	F%	
Custom ledger type(s)	??	??

Cost code structures

Add'l configuration options to consider

Subledger Level	Transaction Level
• Specific data attributes which can be incorporated into WBS	• Subsystem transactions which update specific job cost WBS accounts
• Ability to track additional detail without adding more WBS accounts	• Ability to have individual transactions summarize at typical WBS account balance level

• Same level of detail within account balance analysis as typical cost code structures
  • Estimate to complete analysis
	• Summarized WBS account analysis
	  • If limited/few transactions within each WBS account, question if structure is adequately proportioned

• Job status inquiry can summarize at the WBS account level or individual Subledger level	• Ability to drill into WBS accounts for transaction level of detail

Questions to answer:
What information is necessary to analyze at the WBS account level vs. what transaction information is necessary for drill down purposes?

Cost code structures

Methods of computation (job forecasting)

- Definition: Used to define the means by which to calculate job forecast (projected final) information
- JDE offers over 15 different methods
- Each has specific situations where they apply
- Here are a few of the more widely utilized MOC's:

Method D – Default

- Greater of revised budgets OR actuals plus open commitments
- Based on amounts first and then units second

Methods S & I – Summary & inclusion

- S & I is used when you want to budget at a higher level of detail, but record actuals at a lower level within the same cost code.

Method B – Buyout

- Used for subcontracts and non-inventory purchase orders
- Projected final values = actuals plus open commitments (must recalculate projections)

Method G – Revenue

- Conservative approach
- To be able to recognize more revenue than what was budgeted, you must revise your billing estimate!

Cost code structures

Methods of computation (job forecasting)

- A – Account budget - forced
- B – Buyout or fixed price contracts
- C – Percent complete from cost code header
- D – Default
- E – Estimate to complete
- F – Forced
- G – Budget default – forced
- H – Labor quantity
- I – Include
- L – Labor
- N – No projection
- O – Override
- P – Percent complete
- Q – Quantities
- R – Revenue - unit price Contract
- S – Summary
- T – Total
- U – Remaining unit rate
- V – Revenue - absolute value

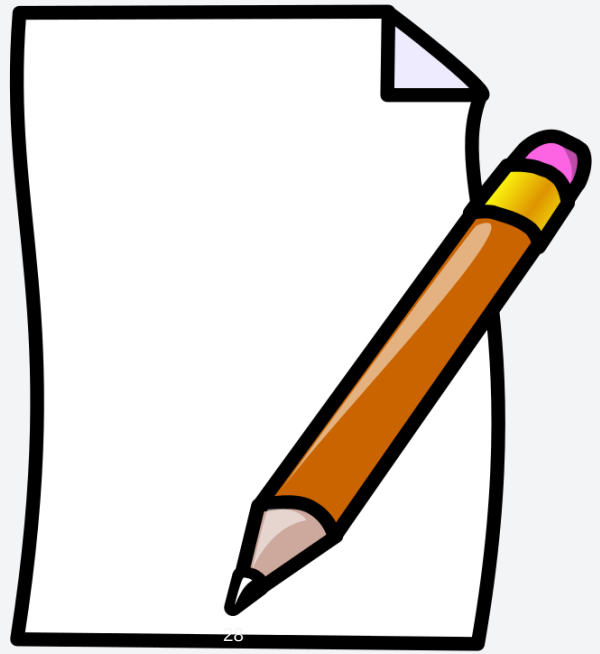
If that isn't enough…ask me about Advanced Job Forecasting!!

Cost code structures

Getting started

What can I do to get started?

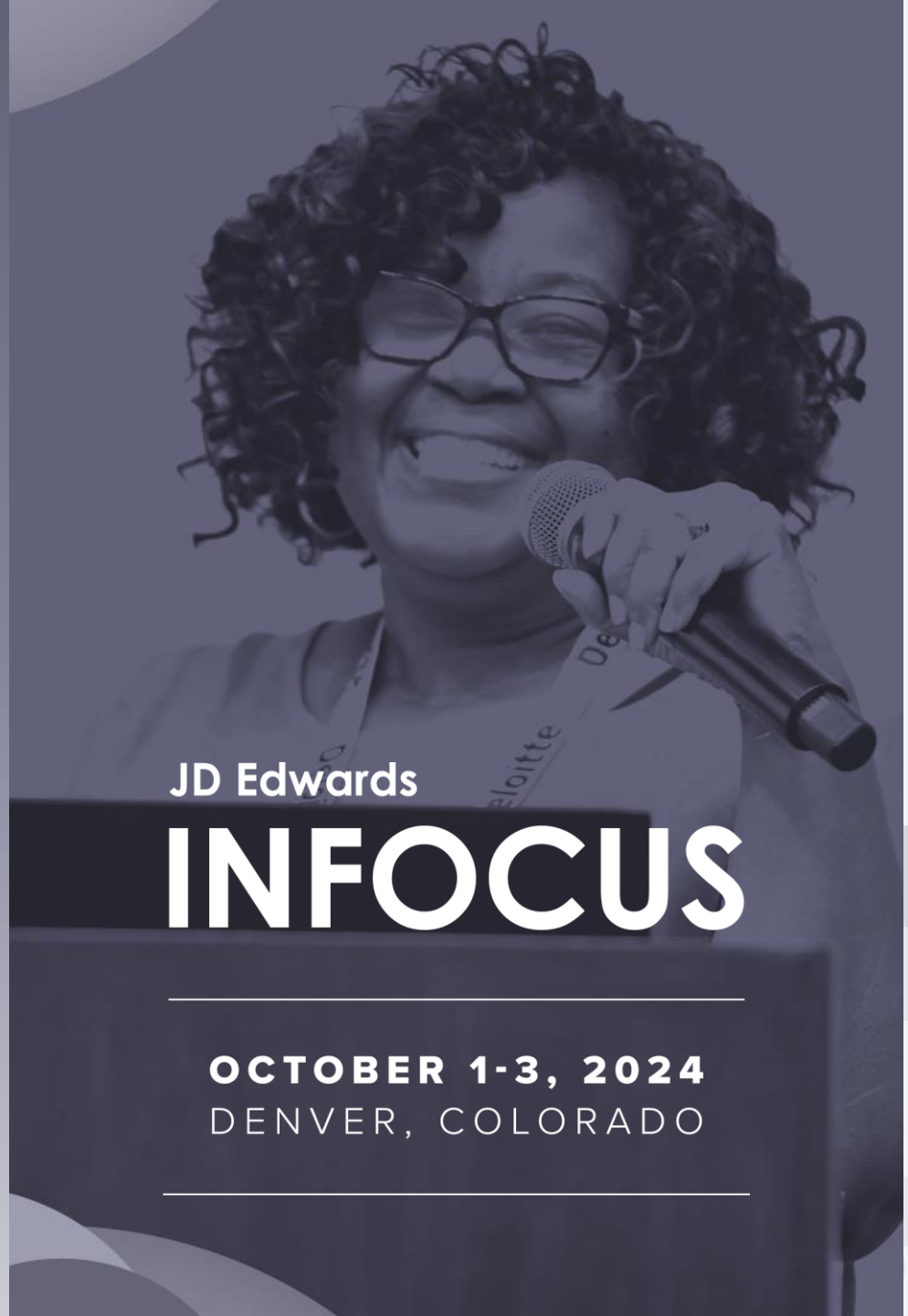
- Begin making a list of your cost activities
  - Include roll-ups where applicable
  - Don't worry about the numeric values as this point
- List out the cost types you need
  - Consider additional breakdown (e.g. labor)
- Make a list of the questions that you would like your CC structure to be able to answer
  - List of attributes to track
  - Sample reports / examples to review



Cost code structures

Next steps

- CC structure modeling – Excel
- CC structure modeling – in JDE
- Consultant additional expertise as necessary



Contact me:

Craig Davied, Managing Director, Grant Thornton

craig.davied@us.gt.com

Session ID: P-049350

Quest
JD Edwards
Community