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M&A due diligence workshop 2017 Engineering and Construction Conference

Introductions



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Торіс		Presenter(s)	Timing
Introductions		All	5 minutes
The M&A Lifecycle and Overview of Transaction Execution		Todd Wilson / Bruce Gribens	5 minutes
Importance of Integrated Due Diligence	2	Mark Andrews / Bryan Johnson / Rob Strahle	10 minutes
Functional Due Diligence Breakouts	 Accounting, Finance, & Treasury Tax IT Project Due Diligence 	 Todd Wilson and Bryan Johnson Bruce Gribens Mark Andrews Rob Strahle 	25 minutes each

The M&A Lifecycle and Overview of Transaction Execution

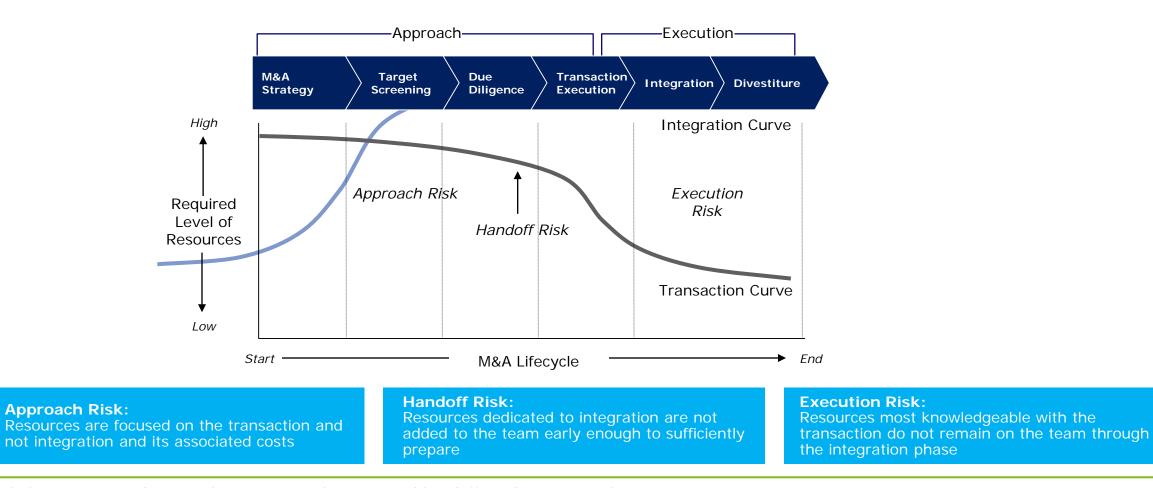
M&A Lifecycle Overview

A multidisciplinary and integrated approach is key to success across the M&A lifecycle

		The M&A Lifecycle		
Pre-deal		Pre-Announcement	Post-Announcement	
M&A Strategy	Target Screening	Diligence & Evaluation	Integration / Separation Planning	Integration / Separation Execution
Establish a broad corporate strategy and assess means to realize that vision Review portfolio against value creation and strategic imperative Assess and prepare for multiple, potential acquisition pathways to achieve goals Identify, evaluate, and prioritize strategies for achieving organic and inorganic growth Assess capability to undergo a strategic M&A program Establish decision rights and accountability within the organization	 Define and prioritize acquisition criteria to apply to entire universe of potential targets Collect screening data from entire universe of potential targets, and apply the acquisition criteria to evaluate potential fit Prioritize initial acquisition candidates and develop profiles High level pre deal integration planning and initial diligence for synergy opportunities Detailed screening of potential targets on the basis of business strategy, competitive strategy and value potential Valuation of business entities, including financial modeling, approaches, and challenges 	 Conduct Financial / Accounting and Tax diligence Perform business due diligence, including commercial, operations, IT, and HR Initial internal controls diligence Identify core and non-core portfolio assets and eventual sale opportunities Negotiations execution including deal valuation, asset or target valuation and structuring Refine integration planning on target 	 Establish operating model and overall integration blueprint Organize controls such as integration management office and synergy / work thread teams Conduct clean room analysis to front load synergy capture Develop Day One requirements and End State plans Design customer, market, product and organizational strategies Address people and culture issues Develop and execute a communications strategy 	 Provide "Day 1" stabilization of the organization and functional capabilities Execute and manage integration plans Deploy all clean room analysis and immediately execute on synergy opportunities Define customer retention, workforce transition, communication and growth plans Integration Execution Support IP rights protection and management

Leading Practices

Leading companies tightly integrate their upstream and downstream M&A processes



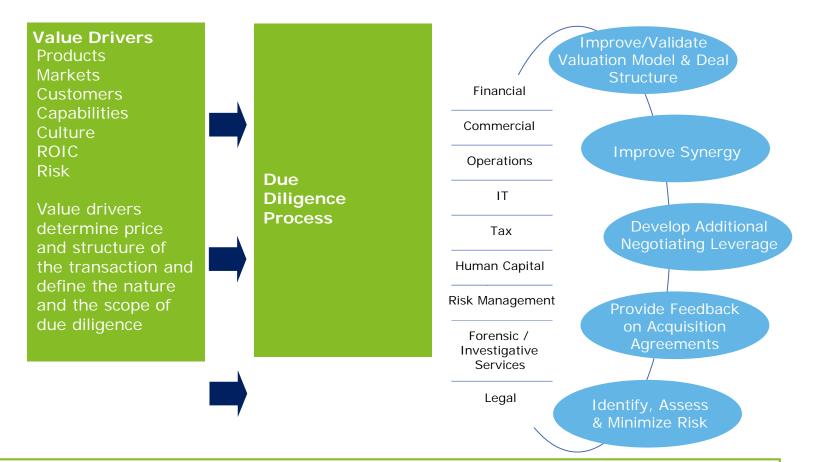
A holistic, integrated approach minimizes risks, gaps and handoffs and captures value

Due Diligence

A dynamic set of activities involving working with many unknowns identified via an iterative process & addressed when the acquirer takes eventual control of the target

Typical Due Diligence Issues

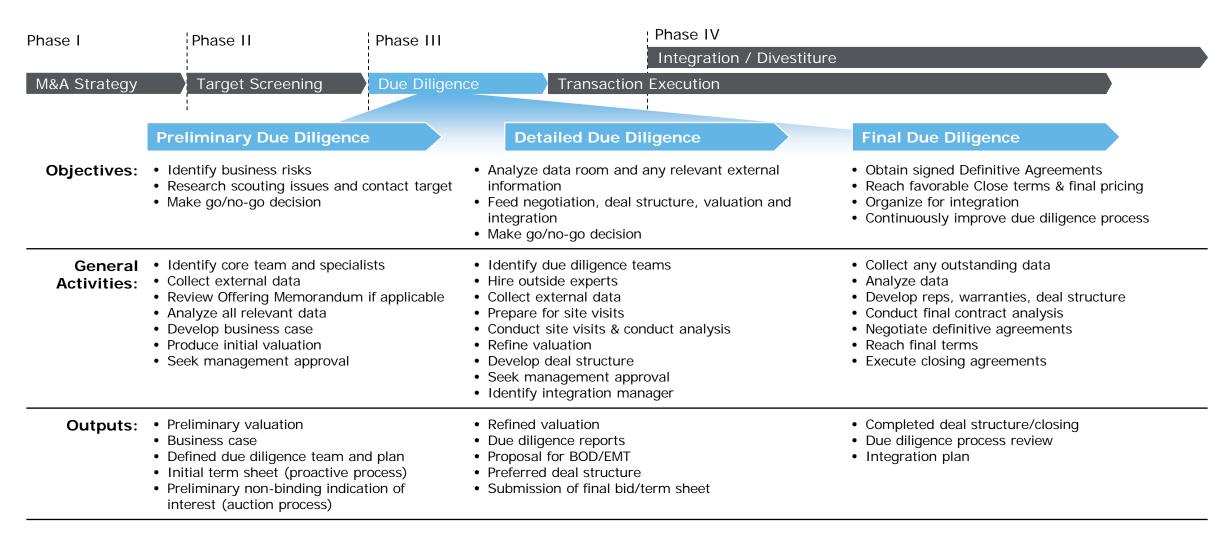
- Early capture and realization of synergies from the M&A transaction
- Uncertainty around target management's claims on growth
- Stability of customer base
- Accelerating time to close
- Tax and accounting structuring
- Internal control structure, including Sarbanes Oxley compliance
- Effect of regulatory matters on a target company's industry
- Identification and quantification of tax exposures and optimization of related benefits
- Employee benefits, information technology systems and risk management practices
- Supply chain and manufacturing site inspection
- Benefit plan funding and liability exposures



Our experience shows that it takes a well organized and executed, multidisciplinary approach to due diligence, focused on validating value proposition assumptions, understanding risks and providing actionable feedback

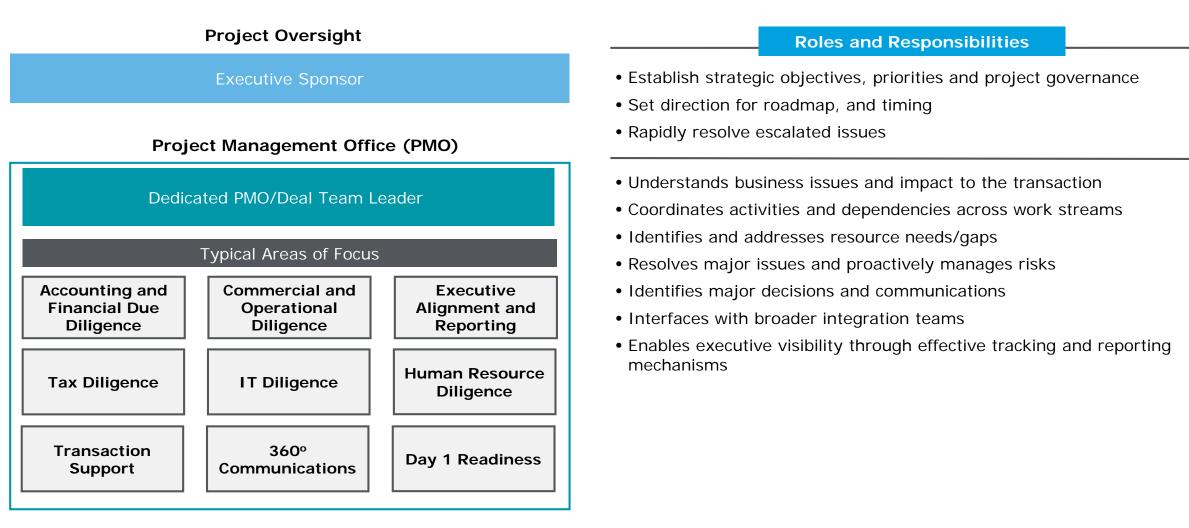
Due Diligence

Due Diligence objectives, activities and outputs can be segmented into three stages within the M&A lifecycle



The Importance of Integrated Due Diligence

The Deal Team Lead Defines the Process and Manages the Transaction Lifecycle



Illustrative Functional Responsibilities

	Preliminary Due Diligence	Detailed Integration Plann	ning & Execution
	Preliminary Due Diligence	Due Diligence	Deal Closing
Business Development	 Develop preliminary acquisition business case Solicit approval from Executive Committee 	 Finalize negotiated Definitive Agreement Compile due diligence reports from functions Develop detailed financial model 	 Confirm closing working capital and balance sheet adjustments Prepare for close with Legal Carry out hand-off to Integration
Integration Lead/Team		 Participate in due diligence meetings and review issue log Gather deal-model input on synergy opportunities and integration costs 	 Finalize approach and timeline Conduct planning kick-off Prepare for Day 1 / integration
Commercial	 Identify significant concentration risk and any logistical issues Consider direct procurement Consider contractual commitments 	 Review pricing strategies, elasticity Review customer creditworthiness, payment terms, length of relationship Review intercompany sales 	 Identify customer relationship owners and retention strategy Create customer communication plan Identify cross-selling opportunities
Operations/ Technology/ Engineering	 Conduct site visits Assess production performance Outline operations & maintenance requirements 	 Define capex requirements Identify technical and intellectual capital potential Identify significant property & engineering liabilities Assess operations & maintenance performance 	 Highlight risk mitigation activities for maintaining operations Plan for near-term integration Identify opportunities for integrating technical capabilities Identify critical resource retention needs Conduct asset rationalization
Procurement		Conduct spend analysisConduct inventory analysisCarry out contracts assessment	 Confirm vendor/supplier strategy Confirm procurement processes harmonization strategy

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Illustrative Functional Responsibilities

	Preliminary Due Diligence	Detailed Integration Plann	ing & Execution
	Preliminary Due Diligence	Due Diligence	Deal Closing
Finance/ Treasury	 Conduct EBITDA normalization Conduct preliminary valuation Identify potential funding sources 	 Review quality of earnings Set definitive agreement working capital target Obtain lenders 	 Control of cash upon Day 1 Readiness to conduct first consolidated financial close
Тах	Identify preliminary tax structureIdentify cash flow impact of tax issues	Define tax structureIdentify tax liabilitiesEstimate transaction taxes	Ensure legal entity readinessProvide tax input to first closeGive tax input to payroll readiness
HR	 Highlight executive organization and golden parachute implications Identify significant union, severance or pension liabilities 	 Define all HR related liabilities Highlight similarities/differences in total comp, titles, perks Develop org charts & headcount Review processes, outsource providers 	 Harmonize HR policies, benefits, compensation leveling Develop retention strategy Provide input on key communication needs
Legal (Incl. Environment al)	 Identify significant litigation claims Assess non-compete clauses Draft term sheet Highlight environmental liabilities 	 Legal due diligence Anti-trust diligence Draft and execute Definitive Agreement 	 Provide guidance on info that can be shared between companies Edit and review communications Implement "Clean Team", if applicable
Risk management	 Assess target profile and risk focus areas 	Conduct insurance due diligenceConduct FCPA diligenceRegulatory diligence	 Harmonize risk management policies, practices, people, processes

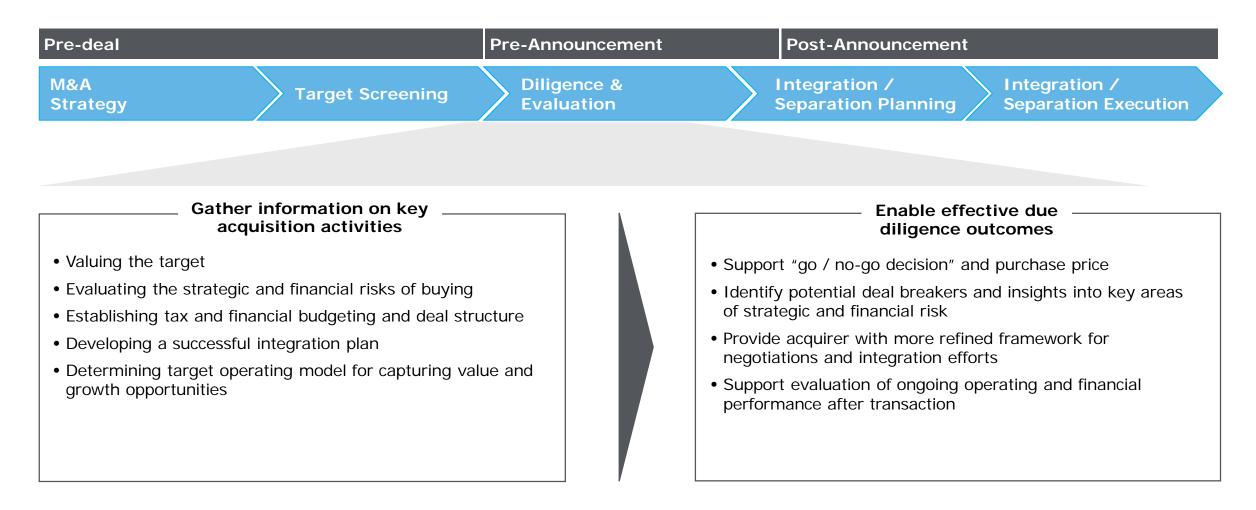
Illustrative Cross-Functional Responsibilities

	Droliminary Duo Diligonas	Detailed Integration Plann	ning & Execution
	Preliminary Due Diligence	Due Diligence	Deal Closing
Communicatio ns & Change Management	 Be aware of deal so to anticipate future communication needs Lead: HR/Comms 	 Begin planning for public announcement Produce press release Provide input on deal primer to integration teams Identify change or cultural integration risks (preliminary) Lead: HR/Comms 	 Develop: Day 1 communications plan Day 1 signage requirements Internal communications (town halls, newsletters, FAQs, web) Outline cultural considerations Review training needs Lead: HR/Comms
Organization Design		 Outline organization integration considerations Identify critical executive/staff retention needs (preliminary) Lead: HR 	 Outline options & timing for combining org structures Determine org structure implementation plan Lead: HR
Synergy Capture	 Identify major sources of synergy (expense reductions, new revenue) Lead: Business Development 	 Provide deal-model input on synergy opportunities and costs to achieve Develop preliminary synergy targets Lead: Business Development 	 Lead "bottom-up" synergy validation across teams Drive creation of synergy work-plans, accountabilities & metrics Prepare synergy realization tracking tool Lead: Finance
Day 1 Readiness		Conduct Day 1 Risk Assessment	 Facilitate overall Day 1 readiness Tailor Day 1 checklists Review Day 1 readiness plan

Accounting, Finance, Treasury Break Out

What is the Purpose of Financial Due Diligence?

Financial due diligence is conducted to support deal decision making, negotiating, and eventually, post-announcement planning and execution



Financial Diligence Focus Area

Typical focus areas of financial due diligence include the following

Investigate Valuation Considerations • Quality of earnings • Identify unusual or non-recurring adjustments • Significant operating and financial trends • Bridging operating periods Analyze the Technical Application of GAAP • Understand accounting implications of potential deal Gain Understanding of Business, Operations, and Balance Sheet

- Working capital and other purchase price adjustment mechanisms
- Treatment of debt and other liabilities
- Conduct of business between signing and close
- Regulatory issues
- Representations and warranties, indemnification provisions



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Informed Contract Negotiation

Deep Dive – Quality of Earnings

Quality of Earnings drives Earnings Before Interest, Depreciation, and Amortization ("EBITDA"), which typically has a direct impact on deal value

Why is it important?

Purposes of

Quality of

Earnings

Analysis

- Quality of Earnings analysis identifies potential adjustments to EBITDA, which can directly affect price, financing, and other value considerations
- Other quality of earnings analyses: organic vs. acquisition growth, significant lost customers, customer concentration, FX impact

- Understand operating performance and cash flow, including amounts available for debt service
- Identify items to be considered in determining the company's financing EBITDA and resulting leverage and interest coverage ratios
- Identify items to be considered in determining historical EBITDA number for modeling/valuation purposes
- Bridging operating periods and understanding variances / drivers of change in the business

Quality of Earnings – Normalization Example

Normalized EBITDA

US\$000	FY15	FY16	LTM Mar-17
Revenue	100,000	120,000	125,000
Net income	10,000	15,000	17,500
Depreciation and amortization	5,000	5,000	5,000
Interest expense (income)	2,500	2,500	2,500
Tax expense	1,000	1,000	1,000
Reported EBITDA	18,500	23,500	26,000
Management adjustments:			
1. Noncash stock based compensation	-	-	-
2. (Gain) loss on disposal of assets	-	-	-
3. Acquisition related expense			
Total management adjustments	<u> </u>		<u> </u>
Management adjusted EBITDA	18,500	23,500	26,000
Diligence adjustments:			
Independent auditors unrecorded adjustments	-	-	-
 One-time expenses (e.g. extraordinary legal expenses, one-time projects)□ 	-	-	-
Cut-backs or deferrals of discretionary costs and expenses	-	-	-
 Unique revenues (e.g. large non-core transactions)□ 	-	-	-
8. Out of period items / reserve reversals□	-	-	-
9. Restructuring charges	-	-	-
10. Changes in accounting policies or practices	-	-	-
11. Non-core components of "other" income including gains / (losses) or asset dispose	al -	-	-
12. Off-market or other non-cash compensation	-	-	-
13. Straight-line rent	-	-	-
14. Related party transactions	-	-	-
15. EAC true-ups on fixed price contracts	-	-	-
16. [Other]	[]	[]	[]
Total diligence adjustments			
Normalized EBITDA	18,500	23,500	26,000
Pro forma adjustments:			
17. Public company / private company costs	-	-	-
18. Stand-alone costs	-	-	-
19. Impact of acquisitions and divestitures	-	-	-
20. [Other]	[]	[]	[]
Total pro forma adjustments	-		
Pro Forma Normalized EBITDA	18,500	23,500	26,000
Other Cash flow considerations	•		-
21. Capitalized internal costs (e.g. capitalized software development costs)	[]	[]	[]
22. Capital expenditures	[]	[]	[]

Other Quality of Earnings Considerations

Other items that impact quality of earnings but may not be included in adjusted EBITDA include the following

Financial Reporting Process	Revenue / Growth Assumptions	External Factors	Cost Assumptions	Compensation Expense Analysis
 Application / consistency of GAAP (e.g. revenue recognition, cost capitalization) Internal controls Management's estimates and judgments (e.g., reserve movements) Actual vs. budget or prior year analyses Interim vs. year end accounting methods and reporting policies 	 Organic vs. acquired growth Changes in revenue models Impact of transactions in foreign currencies Normalized run-rate analysis 	 Customers Overlap, concentration and trends Subcontractors Pro forma impact of losses / significant changes in relationships Dependency, alternatives and related trends Terms, discounts Commitments Government regulations 	 Cost structure Impact of incremental costs or cost savings Fixed costs vs. variable costs 	 Cash vs. non-cash Headcount analysis Bonuses and other 'lumpy' payments Consultants vs. employees

Working Capital and Cash Flow Considerations

Thorough analysis of working capital, especially in capital intensive industries, can significantly impact financial due diligence

 Working Capital Due Diligence Identify trends – seasonal swings, unusual "bubbles", and management's ability to manage balances Normalized items (one-time reserve reversals, true-ups, etc.) Peak/trough analysis (cash needs) – impact on financing considerations (e.g. size of revolver) Understand payment terms with vendors and customers – identify significant changes in terms Purchase agreements definitions 		 Normalized items (one-time reserve reversals, true-ups, etc.) Peak/trough analysis (cash needs) – impact on financing considerations (e.g. size of revolver) Understand payment terms with vendors and customers – identify significant changes in terms
	Working Capital Management	 Understand how management understands, analyzes and manages working capital Identify and calculate WC ratios (DSOs, DPOs, etc.) Assess Target's ability to manage WC through deferring payables or accelerating receivable collections
Working Capital	Seasonality	 Understand how seasonality impacted historical results Improve forecasting of cash flows Appropriately structure any purchase price adjustment or earn-out mechanisms Determine the magnitude of required revolving credit facilities Intra-Month Variability: In addition to seasonality, there may be variations within a month
	Peak-Trough Analysis	 Analysis that schedules when working capital is at the high and low points during course of a period Consideration of borrowing capacity under revolver in order to have enough financing capacity to take into account WC swings

Net Working Capital Example

Normalized Net Working Capital

US\$000	Dec-15	Dec-16	Mar-17
Cash & Cash Equivalents	5,000	7,000	10,000
Contracts Receivable - Billed	25,000	30,000	35,000
Contracts Receivable - Unbilled	10,000	15,000	20,000
Prepaid Expenses & Other Current Assets	5,000	5,000	5,000
Deferred Tax Asset, Current	1,000	1,000	1,000
Current Assets	46,000	58,000	71,000
Accounts Payable & Accrued Liabilities	(5,000)	(7,000)	(10,000)
Advances and Billings in Excess of Cost	(10,000)	(12,000)	(15,000)
Current Portion Bank & Notes Payable	(3,000)	(2,000)	(2,000)
Current Liabilities	(18,000)	(21,000)	(27,000)
Reported Net Working Capital	28,000	37,000	44,000
Definitional Adjustments:			
Cash	(5,000)	(7,000)	(10,000)
Long-Term Debt, Current Portion	3,000	2,000	2,000
Total Definitional Adjustments	(2,000)	(5,000)	(8,000)
Adjusted Net Working Capital	26,000	32,000	36,000
Diligence Adjustments:			
1. Current portion of pension obligations	1,000	1,000	1,000
2. Current portion of deferred compensation liabilities	2,000	2,000	2,000
3. Acquistion related earn-outs	5,000	-	-
4. Restructuring liabilities	3,000	2,000	1,000
5. [Other]	[]	[]	[]
Total Normalization Adjustments	11,000	5,000	4,000
Normalized Adjusted Net Working Capital	37,000	37,000	40,000

Net Debt Example

Net debt and debt-like items

US\$000	Dec-16	Mar-17
Net debt		
Cash and bank balances	7,000	10,000
Current portion bank & notes payable	(2,000)	(2,000)
Long-term debt and notes payable	(50,000)	(48,000)
Subtotal	(45,000)	(40,000)
Debt-like items		
On balance sheet		
1. Pension obligations - ST	(1,000)	(1,000)
2. Pension obligations - LT	(10,000)	(10,000)
3. Deferred compensation liabilities - ST	(2,000)	(2,000)
4. Deferred compensation liabilities - LT	(5,000)	(5,000)
5. Restrucring liabilities	(2,000)	(1,000)
6. [Other]		
Total debt-like items	(20,000)	(19,000)
Total potential net debt	(65,000)	(59,000)

Other Purchase Agreement Considerations

Thorough analysis of working capital, especially in capital intensive industries, can significantly impact financial due diligence

Торіс	Considerations
Purchase Price Mechanism	 Many deals are structured as "cash free/debt free" meaning there will be a purchase price adjustment for cash, debt, and working capital Negotiation of the Target Working Capital and the Definitions of Cash, Debt and Working Capital directly impacts purchase price Thorough diligence should be performed prior to committing to a Target Working Capital amount or methodology
Earn Outs	 Common way to bridge buyer vs. seller expectations Often creates complexity in post close management Structure and definitions are key to achieving both deal execution objective and in subsequently operating the business Can result in earnings volatility
Establishing a "Peg"	 The purchase agreement defines how working capital will be determined at closing "Peg" - Closing Date Working Capital = Purchase Price Adjustment Establishment of the "Peg" is different from and does not have to be consistent with the "definition" of working capital in the purchase agreement (i.e., a liability could be excluded from peg, but included in definition) Stripping out unusual liabilities that are of a non-recurring nature (i.e. large one-time accruals/payables, restructuring accruals, accruals related to significant fixed asset purchases, etc.) is an important consideration when evaluating the target working capital peg Excluding certain accruals such as bonuses from peg but including in the definition effectively have the seller "pay" for the accruals by reducing the purchase price Common ways to calculate the peg: Historical averages (excluding anomalies) Projected closing date balances Projected averages Industry norms (especially for carve-outs) Collar, ceiling, floor

Non-Operating Cash Flows Overview

These are often hidden in accruals for non-recurring items (that typically should be adjusted in determining adjusted EBITDA) and in long-term assets and liabilities

Definition	Non-Operating Cash Flows: Cash flows that are not related to the day-to-day, ongoing operations of a business (non- working capital)
Purpose of Analysis	 Identify significant cash flows which may not be included in management projections, models Understand true cash needs during modeling period Purchase agreement negotiations (definitions of debt, escrow requirements, representations and warranties, etc.)

Non-Operating Items Commonly Identified in the Diligence Process

Lease Obligations	Pension Benefit Payments and Plan Funding Requirements	Dividends Payable
Severance	Purchase Accounting	Prepayment Penalties / Unamortized Discounts on Debt
Restructuring Charges	Deferred Compensation	Stock Transactions
Capital Spending	Consulting Arrangements	Acquisitions
Asset Retirement Obligations	Environmental / Legal Settlements	Seller Notes
Change in Control Costs	Non-Compete Agreements	Hedging / Derivative Activity
		Earnouts

Tax Break Out

Tax: Due Diligence, Structuring, and Planning

Tax Due Diligence

- Identify and understand the nature of historic tax exposures that buyer could become primarily or secondarily liable for as a result of the proposed transaction
 - Consider tax indemnity provided by seller
- Gain information that will be useful for:
 - Structuring the transaction;
 - Obtaining financing;
 - Negotiating the contract terms
- Verify that the transaction complies with investment or acquisition criteria
- Identify integration issues or other matters requiring management focus.

Tax Structuring

- Develop a tax structure for the proposed transaction and evaluate the tax impact to buyer and seller
- In developing a tax structure, focus is on:
 - Exploring ways to obtain and maximize a step-up in tax basis for buyer
 - Solving for the tax objectives of the buyer and seller which may conflict
- Model prospective effective tax rate and cash taxes for the Target, including the tax basis step-up
- Communicate with tax counsel to ensure that the tax structure for the proposed transaction is properly reflected in the transaction documents

Tax Planning

- If tax attributes (e.g., NOLs) of the Target will carry over, consider potential limitations on the use of such tax attributes
- If Target and buyer use different tax methods of accounting, consider the implications of Target (or buyer) adopting new tax methods of accounting post-transaction
- Consider opportunities to streamline the legal entity structure of the Target
- Consider the implications / opportunities for buyer's state and local taxes (e.g., filing requirements, blended income tax rate) from combining Target's legal entity structure and geographic footprint with buyer's structure and footprint
- Support local incentives and credits expansion and preservation of existing benefits

Buyer's diligence focus areas: Financial and tax

Key overriding themes

- Availability of information—at least all the open years for tax (generally 3–4 years)
- Consistency of information—does data contradict itself?
- Ability to anticipate issues
- Mitigating factors for exposures or issues that may arise during diligence

Key areas of diligence

- Commitments, contingencies, and exposures
- Tax exposures
- Tax compliance
- IRS audits and other tax audits.
- Tax attributes (e.g., Net operating losses, R&D credits)

Tax exposures and compliance

Key concerns in M&A

- Tax returns timely filed (income, sales, property, payroll, escheat, VAT, etc.)
- Tax exposures and reserves

Key areas

- Income taxes (federal and state)
 - Loss co vs taxpayer
- Tax contingencies and reserves
- Sales and use taxes
 - Nexus (physical presence within a state)
 - Sources of revenue subject to tax
- Transfer pricing
- Permanent establishment (physical presence within a country)
- Withholding tax
- Outstanding intercompany balances
- Interest deduction limitations
- Payroll taxes (e.g., worker classification)
- Tax audit history
- HR related taxes (280G and 409A)

Tax attributes

Key concerns in M&A

- Validity of tax attributes (e.g., net operating losses, R&D credits)
- Prior limitations of tax attributes due to an ownership change

Key areas

- Tax shield or value add
- Bid letter may require an allocation of purchase price to tax attributes
- Supporting documentation for net operating losses and R&D credits
- Review prior Section 382 limitations and calculate new section 382 limitations created by the proposed transaction
- Calculate NPV of attributes to support bid price

Structuring, Modeling and Integration

Key concerns in M&A

- Acquisition structure
- Post acquisition restructuring
- ETR modelling
- Integration

Key areas

- Legacy IP structure, supply chain and sales model
- Post acquisition movement of legal entities and assets
- ETR drivers remain or will change
- Collect necessary debt for Day 1 readiness

Key questions that effective seller diligence can address

Business overview

- What is being sold?
- What is the history of the business?

Business environment

- What are its market, competitive, regulatory and technological environments?
- What are the business' resources?

Business operations

- What are the business' products/services?
- How does it address procurement, production, marketing & sales, distribution and support functions?
- What are its corporate governance policies and procedures?

Historical revenues and earnings

- What is the quality and sustainability of historical revenue and earnings?
- What is the operating margin profile?
- What does the underlying cost structure look like?

Employee benefits

- What are the pension plans and benefit programs?
- Are there any funding obligations?
- Are there any significant differences between recorded expenses and cash contributions by company?

Forecasts/projections

- What view does management have of the business in the coming three years?
- How does forecasted underlying profit look?
- What are the key assumptions that drive management's forecast?
- Are the projections realistic based on historical performance? How do they compare to historical trends?

Integration/separation

- What are the issues and opportunities inherent in the business being sold?
- What are the separation considerations?
- What opportunities are there for the buyer to create value?

Historical cash flow

- How much cash does the business generate and how does it use it?
- How does it manage its working capital?
- How does seasonality impact cash flows generated from the business?
- What is expected annual CAPEX and R&D?

Historical assets/liabilities

- What are the quality of assets and liabilities?
- Are there any potential exposures?
- Are there any assets and liabilities that should be considered to be cash-like or debt-like for purposes of valuation?

Taxation

- What is the company's tax "footprint"?
- Does the company have any direct or indirect exposures?
- Are there any planning opportunities to increase value?
- Are there mitigation strategies?
- Are there tax attributes that can be monetized?

Restricting the scope of seller diligence may detract from its value.

Frequent Concerns

Potentially unnecessary disclosure of deal issues

Process may be too demanding of management's time

> Diligence report might be too negative

Buyers will still do their own diligence

We effectively pay for buyer diligence

Due diligence conducted by a purchaser would identify the issues anyway but with seller diligence you have early knowledge and control over the release of this information.

You have much greater control than if several bidders are all doing acquisition due diligence simultaneously using their own advisors.

For credibility, it is critical to issue a balanced report that fairly reflects the business. You will be made aware of any issues and have the opportunity to address them proactively. This is not possible when purchasers conduct their own due diligence.

If the scope is carefully set and the report is balanced, then bidder focus should be limited to key areas specific to their funding structure and individual integration issues.

Better quality of indicative bids and a level playing field for bidders should help to maximize value of the sale, thereby returning the value of the costs involved by multiple times.

IT Break Out

Transaction Execution Information Technology Due Diligence

Typical Issues

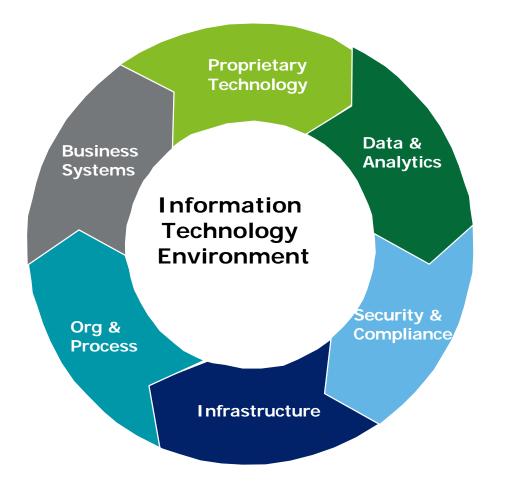
- Technology roadmap and projects lack clear vision for adding business value
- Inadequate IT governance and management processes (e.g., software development, change control, configuration management)
- IT organization lacks resources or capabilities to maintain and provide adequate internal or customer support and offerings
- Significant license, maintenance, and/or warranty agreements are out-ofdate, not in compliant with agreement terms, or are expiring
- Underlying hardware aging, obsolete, or nearing full capacity and requires significant capital investment to replace or expand
- Software or hardware architecture is inadequate to support effective scaling for growth
- Significant processes require manual intervention that may inhibit ability to scale and affect reporting accuracy
- Systems lack claimed functionality, suffer from poor performance, or are frequently unavailable / unstable
- Redundant or duplicative internal systems (often acquired through acquisition)
- Proprietary systems include a significant amount of hard-coding, diminishing the ability to easily maintain, configure, and/or enhance key internal systems or product technology offerings
- High or disproportionate IT operating expenses or total cost of ownership for IT (historical and/or projected)

Solutions

- IT strategy assessment to analyze the company's business objectives/plans and the current IT environment to identify business-IT gaps and corresponding valuable IT initiatives
- Define a more mature, standard set of IT processes to enable more effective IT operations
- Assess IT operations and establish an IT investment strategy to address deficiencies (e.g., inadequate IT resources, obsolete hardware, insufficient software licenses)
- Assess enterprise architecture or application landscape to determine strategy for addressing system limitations or issues include solution upgrade, re-architecting, replacement, or consolidation
- Analyze IT operations and expenses to determine opportunities to reduce spending (e.g., rationalizing systems/resources, outsourcing, implementation of more cost-effective technologies)

IT Due Diligence Objectives

Assess Target's IT environment to identify key capabilities, risks, and costs that can have a material impact on the company's value and investment potential.



Key IT Due Diligence Objectives

- Identify sources of potential operational or financial risk related to the IT environment of the target company
- Assess the current IT operating costs and develop an estimate of the target state IT operating costs
- Develop an estimate of the one-time costs and time required to achieve the target state IT environment
- Determine the extent that IT enables the business and opportunities for IT to help improve the effectiveness of business operations
- Validate IT's ability to provide insightful data and business intelligence for managing the business
- Evaluate IT's contribution to company value (especially for proprietary technology)

IT Due Diligence Scope and Key Factors

To properly evaluate capabilities, risks, and costs in a company's IT environment, one must holistically review IT landscape across a range of technology domains and factors.

Business Systems

- Level of business enablement, automation, and integration
- Age, support, and maintenance plan
- Application stability and scalability
- Vendor performance, viability, and commitments
- Investment requirements and TCO

Organization & Process

- Staff capability, tenure, sufficiency
- Outsourcing and consulting relationships
- IT governance standards and maturity
- Strategic planning and projects
- Data backup and disaster recovery
- Labor spend and cost benchmarks

Proprietary Technology

- Functional capabilities and limitations
- Technical architecture
- Software development process maturity and quality
- Development platform, tools, and environment
- Technology roadmap and cost projections



Infrastructure

- Data center and hosting environment capacity and safeguards
- Hardware age and viability
- Hardware reliability, performance, and scalability
- Vendor performance, viability, and commitmentsInvestment requirements and TCO

Data & Analytics

- Data architecture and analytics tools (or capabilities)
- Data integrity, quality, and comprehensiveness
- Management's ability to access, analyze, and report on business data
- Data as an asset

Security & Compliance

- Security governance and oversight
- Physical and logical security controls
- Security risk assessments and mitigation efforts
- Industry and regulatory compliance (PII, PCI, HIPAA, etc.)
- Risk and cost exposure from security deficiencies and non-compliance

IT Due Diligence Approach

A typical IT diligence project includes intensive data gathering and discussion with management

	Review Available Documentation	Conduct Meetings with Target IT Management		Observe Custom Solutions and Processes		Prepare Key Deliverables
Г	ד <u>י</u>	Гурісаl Key Diligence Proc	esses			Outputs / Deliverables
•	 Evaluate IT enterprise archited Evaluate organizational effection Start of anticipated growth of Start at the highest level and Consider utilizing industry sub Identify the application of inno includes technologies such as and social networking 	ctiveness when business syste on both the systems and the d then progress deeper as nec ubject matter advisors to assis novative technologies to stand	ns are person essary on an ard bus	scaled, determining the nel as-needed basis siness problems. This	•	 High-level summary of key issues, risks and observations in regards to the redundancy, stability, scalability, reliability and security of IT systems Customer product technology risk analysis (quality/sustainability) Customer product technology evaluation report Order-of-magnitude estimates of expected costs, resources and timeframes required to address risks and issues, and capitalize on potential improvements

Key Areas and Issues

	Sample Topics	Common Findings
Organization	 What are each IT groups' responsibilities? Is there a succession plan or cross training in place for key staff? How many business users is your team supporting? Is there a developed IT career path roadmap to help retain talent? 	 IT skills not aligned with current / future requirements Lack of a dedicated leader or leader is not the right fit for the organization Organization size and associated costs are misaligned with the rest of the industry Staff utilization is too high/low for a prolonged period of time Turnover rate is high IP is not spread across the team
Strategy	 Is there a strategic IT plan? Discuss IT roadmap and the associated projects, costs, timeframes How are the business and IT strategies coordinated? 	 Lack of department vision IT goals are misaligned with the business strategy Significant project re-prioritization occurs throughout the year IT budget vs actuals are misaligned
Processes and Controls	 Are IT processes and procedures documented? Discuss IT-related assessments Discuss your change management process Have you had any security breaches? Are policies in place to deal with breaches? How often are IT operations metrics reviewed? 	 Lack of disaster recovery and other documented processes Processes are not comprehesive Audits have consistent critical findings IT Operations are not monitored or not run in an effective and efficient manner Shadow IT costs exist in the organization

Key Areas and Issues

	Sample Topics	Common Findings
Vendors & Contracts	 Discuss any reliance you have on outside vendors Are all software licenses current? How are vendor costs monitored against market rates? Are current versions of software and infrastructure in place and supported by relevant vendors? 	 Expired maintenance contracts Contracts that are non-transferable Significant dependency on a vendor with no contingency plan in place if vendor service abruptly ends No regular review of vendors rates to ensure cost efficiency
Projects	 Discuss details, costs and timeframe of each project contemplated Do any projects have resource constraints and are there associated mitigation plans in place? Discuss your project management methodology including how the team manages scope, timing and budget 	 Lack of an IT roadmap Projects do not add business value Projects are over budget or do not complete on time Projects are taken on without any consistent process
Spending	 Discuss the overall IT budgeting process Discuss any significant variances between the operating budget for this year and last year Provide details concerning any unusual or unexpected costs related to software or infrastructure that have occurred recently 	 CapEx and OpEx are disproportional to comparative companies No IT Budget or process exists Unexplained variances in year over year costs Unusually different CapEx compared to historical department trends

Key Areas and Issues

	Sample Topics	Common Findings
Applications	 What level of customization has been performed on your systems? For proprietary applications, please discuss your system development life cycle Are applications significantly integrated? Did you experience any recent compliance issues? 	 Consistent system reliability issues or complaints Significant number of systems customizations that make it difficult to maintain or upgrade the system Build up of technical debt Obsolete applications Complex application suites System is not readily scalable System has known security holes Non-compliant IT systems
Infrastructure	 Please describe your data center environments What is the age of existing assets, useful life of infrastructure, and refresh cycles? Explain your data backup process Do you have a documented disaster recovery plan and how often is it tested ? 	 Insecure data center No redundancy in data center or data backups Obsolete servers, workstations, network appliances Reliability Issues Lack of investment in infrastructure
Carve Out Considerations	 Which shared staff, applications and infrastructure are planned/not planned to accompany the transaction? What Transition Services are being contemplated and for what length of time? Have you estimated one time and recurring costs for a standalone environment? 	 Shared resources will need to be replaced Key human resources will not accompany the transaction resulting in a loss of operational efficiency (due to lack of IP) The Seller has not fully vetted out TSAs to be offered There is a significant difference between the Seller's estimated costs and the Buyer's estimated costs

IT Due Diligence Leading Practices



- Engage IT early in the deal cycle to help maximize benefits and minimize risk
- Follow a clearly defined Due Diligence framework to allow the analysis to cover all expected results
- Develop a team of core resources and a pool of advisors on all typical IT areas
- Clearly define the areas and questions to be addressed during the Due Diligence so the IT Team can focus its effort on the appropriate domains



- Timing, responsiveness, and flexibility is key to these fast-paced transactions. Team members should have a significant level of
 flexibility to work with the Deal Team's timeframe
- Focus Due Diligence analysis on critical high-value / high-impact areas
- Prepare significantly to ask the "right" questions of the Target's Senior Management
- Pursue open requests for data until all critical information has been received

Execution

- Escalate quickly and frequently if the Target is not providing requested data in a timely fashion; check electronic data room frequently and keep IT data request list updated
- Understand that remediation costs and integration costs will likely be an order-of-magnitude during the due diligence phase (driven by confidentiality of the deal and imperfect knowledge of the Target)

Project Due Diligence Break Out

Project Due Diligence

Due diligence at the project level is looking under the hood









Project Due Diligence

Construction projects are risky and unpredictable

• Construction Projects typically:

- Are often very complex, risky, and consist of multiple parties, work streams, and project documents
- Usually have a high risk for improperly applied costs, revenue, overpayment, and potentially fraud
- Require understanding of the contract, incurred costs to date, schedule, and estimate to complete
- Understand the potential impacts to estimate to complete of unapproved change orders, claims, expected bonuses, liquidated damages
- To address this, engage engineering and construction specialists who have skills or experience in the construction field

Get "behind the numbers" to form a view on the true revenues, costs, and margin of the target company's core business supporting the Net Working Capital

- Ultimately, to identify matters that could cause buyer to determine to:
 - Walk away from the deal
 - Reduce (or increase) the offering price
 - Seek contractual protections (representations, warranties, indemnifications, etc.)
 - Change post-acquisition plans, include in integration

Why perform PROJECT diligence?

Project Due Diligence Why is it important?

A capital projects survey from the Project Management Institute (PMI)* found that only:

- 54% of projects are completed on-time
- 54% are completed on budget

Perspective on industry trends and challenges

- Technical, geographic and management execution challenges continuing for large projects
- Evolving leadership and management requirements for complex capital projects
- Resource constraints and the global competition for talent
- Innovative contractual frameworks for capital projects
- Poor upfront planning and estimating processes
- Lack of a correct, transparent and continuous feedback loop on projects
- Inadequate systems and performance reporting to effectively manage capital projects and manage risk

Risks

 Inaccurate/aggressive budget estimates

• 38% are finished on-time and within budget

65% met their original goal and business intent

- Cost overruns and scope change
- Poorly structured contracts
- Unorganized resources and inexperienced staff
- Unproven and/or new technology
- Untimely resolution of corrective actions
- Global expansion and understanding of economic/political/business environment

- Untimely, inadequate information flow
- Outdated management technology and processes
- Inconsistent project controls
- Schedule delays
- · Potential claims and litigation
- Joint venture/consortium collaboration and goal alignment
- Inappropriate third-party costs
- Contract compliance issues

Project Due Diligence General Phased Approach

Specifically tailor due diligence based on the Target's operations and the contemplated deal structure

	Phase 1 – WIP Analysis	Phase 2 – Project Analysis
Objective	Risk based analysis to determine which projects to target for deep dive	Understand whether documentation provided as support for project progress and backlog is consistent and in compliance with the accounting standards
Suggested work streams	 Obtain Work-in-Progress Report of all entities and projects Work with Buyer and Target to identify groups/categories and assessment criteria Use technology like data analytics Should include sweet spot as well as outliers in projects just started or projects shown as complete but eroding margin 	 Document Request – typical industry standard docs Interview Project Team if possible (or C-Suite) Contract Assessment – risk based Estimate to Complete - How are forecasts prepared? Physical percent complete - progress toward completion? Schedule and LDs – Updated and in ETC, LDs? Unapproved Change Orders - probability for recovery? Claims/Disputed Work - additional contract revenue? Contingency – are balances appropriate and justifiable Site Visit - if necessary
Output	 Heat map / list of projects to discuss at high level or deep dive 	List of issues, possible adjustments, potential risks

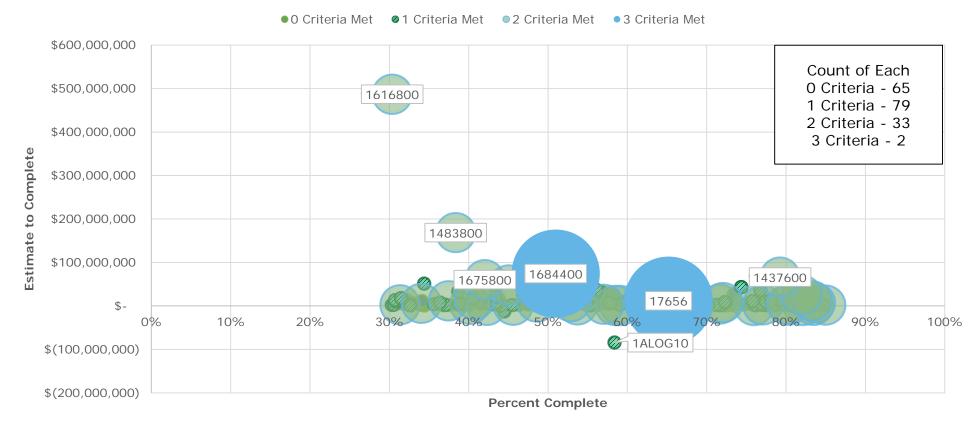
Project Due Diligence Example Project – Phase 1 WIP Analysis

Project Beach

Company A (larger firm) buying Company B (smaller firm) agree to deeper due diligence

Typical WIP Data	Additional WIP Data	Examples of Potential Output Selection Criteria
 Job Number Job Name Descriptive (Profit Center, etc) Budget Cost Budget Margin 	 Contract type JV or no JV Estimate to complete Unbilled Cost or Revenue not 	 Projects in 20% to 90% POC range ETC > Materiality Current Year Revenue > Materiality Contract Type (Fixed price or lump sum) Joint Venture
 Can be by year or cumulative to date Cost to Date Earnings/margin/profit Revenue/billings Percent complete EAC (estimate cost at complete) EAC (estimated revenue at completion) 	 Schedule data (NTP and Substantial Completion) Calculate costs to date vs cost to complete (linear, but high level) 	 Burn Rate Variance > 10%-30% depending on materiality Under recognized margin - compare margin recognized against budget and % complete – say > -10% Margin fade - as a % or materiality (reporting periods, or budget) Unbilled > than % or materiality Project less than 20% complete with significant unbilled or variances in % complete Projects that are shown as 100% complete, but there is \$ left to bill

Project Due Diligence Example Project – Phase 1 WIP Analysis



ETC vs percent complete

Project Due Diligence Example Project – Phase 2 Project Analysis

Key Areas of Focus	Example Findings
General Observations	 Project was shown as 100% complete, so why are there still charges eroding margin Contract for typical self-perform contractor, includes "Owner Direct Payment" to subs, indicating work and fee for Target is only \$10M for \$100M total contract High % of changes on project (40% of original contract value). Potential for claims or approved scope changes by Owner?
Do we have any view as to whether management is being conservative or aggressive in their estimates to complete/estimated revenue	 Area of margin erosion was observed with respect to forecasting man-hours, original budget ETC was manually decreased to win project Time driven cost line items were inconsistent with latest progress schedule, indicating missing costs and reduced margin Profit margin decreased from an original margin of 10 percent to 2 percent as a result of customer related delays and customer driven design changes, which are not resolved and based on aggressive recoveries A "buyout" or "purchase savings" line item was identified that will not be realized based on deeper dive testing
Are there any contractual weaknesses/unfavorable terms or other risk management issues	 Instances identified in which the Target has performed work without an executed contract Contract states that fully integrated CPM schedule needs to be approved by Owner before payment, work has started, and receivables are increasing
Is there anything unusual in the way they are accounting for the contracts that might impact the reported results	 A number of pending claims identified in the selected projects for which costs were not included and revenue was over recognized in the EAC

Wrap Up / Q&A

Deloitte.

M&A due diligence workshop



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