

University of Kansas
Changing for Excellence

Phase II Business Case Executive Summary
Construction - All Campuses

November 4, 2011

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Phase I – construction

Construction auditing combined with a cost control and a strategic sourcing mindset can be an effective method of reducing construction costs. Huron identified opportunities at the system-level on the order of \$4.4M per year.

Current Challenges and Opportunities – Administrative Support

- KU and KUMC have a combined capital plan of over \$960M across 390 potential projects, each in varying stages of development.
- In FY2010, KU and KUMC spent over \$60M on construction related projects
- A variety of potential savings mechanisms from construction spend increases likelihood of success
- Mining invoice details will yield significant benefits both retrospectively based on audit findings and prospectively for improved strategic sourcing opportunities

Goals – Construction

- Develop a set of recommendations on how to improve effectiveness and save money without sacrificing quality
- Construction Strategic Sourcing, Risk Management, Construction Management –best practices
- Promote cross campus usage of preferred construction management practices and business processes

Annual Financial Opportunity

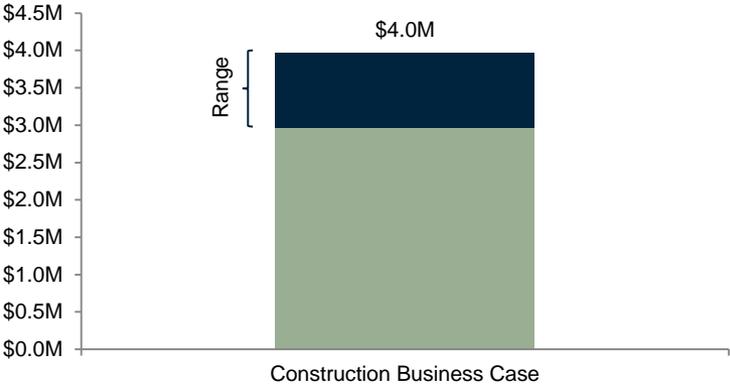
Cost Savings	Resource Reallocation	New Revenue
\$4.1M - \$5.4M	N/A	N/A

Phase II – construction opportunity

Implementing improvements in construction across the system is a transformational opportunity for KU to reduce costs and improve processes.

Phase II Steady State Annual Impact

Phase II – Business Case Financial Summary



- Based on further evaluation, the range of cost savings for construction is from \$2.9M - \$4.0M annually, once fully implemented.
- It will take up to 6 months to fully implement sourcing savings, however realization will phase in as each category is addressed
- Financial Management Best Practices will take 3 -6 months to begin being realized (construction audits can begin immediately)
- Construction Management Best Practices will take 6-12 months to be implemented and savings will begin to accrue

Five Year Cumulative Impact ¹ (Expected Case)	\$000s (parentheses denote costs)
Labor	\$0
Non-Labor	\$13,173
<i>Investment Requirement (total)</i>	<i>(\$1,044)</i>
Net Benefit	\$12,129

¹Year 1 is FY12, which is a partial year

Update – Phase II findings: construction strategic sourcing

The University's greater involvement in construction spend categories will yield significant savings and establish strategic relationships with fewer, more qualified suppliers.

Findings

- Construction Materials is the largest addressable spend category at the University. Today, it is largely managed by a wide variety of general and specialty contractors.
- KU and KUMC manage internal facilities related material spend independently of one another with limited involvement from the procurement group. There is an opportunity for greater synergy between materials purchased for facilities and materials purchased for capital construction.
- Materials are not linked to architectural and infrastructure standards and are purchased at variable prices across projects.
- Infrastructure items (chillers, air handling units, cooling towers, etc) are typically negotiated as “one off” purchases

Proposed Solution

- Create a Construction specific Strategic Sourcing capability within a unified purchasing group with responsibility for all KU campuses. This group would include construction related subject matter expertise and have a dotted line relationship to the Design & Construction teams at each campus.
- Increase the University's involvement in the selection and pre-qualification of contractors performing work on KU campuses
- 18-24 month sourcing effort to get all categories under various multi-year contracts.

Anticipated Results

- Standard contracts for materials, on call contractors, and services
- Business process redesign to allow contractors to use KU contracts
- Enhanced pool of qualified contractors with knowledge of KU campuses
- **Approximately 4-8% savings on addressable material spend or \$5.5M in NPV savings once all contracts are sourced**

Update – Phase II findings: financial management best practices

Construction audits, consolidating risk and bond premiums, and other best practices will ensure the effective use of KU's purchasing power.

Findings

- The University does not perform construction audits today. Cost recovery experience is 1% to 3% of construction spend.
- Payment vouchers are approved without the analytical support needed to test compliance with key contract provisions.
- KU takes a project-by-project approach to construction risk management rather than one based strategically on a portfolio
- Insurance and bond costs are approximately 3% of construction cost. Project specific insurance may duplicate existing University policies and performance bonds may not be required for all contractors.
- KU may be able to “self-insure” for a certain portion of the construction work.

Proposed Solution

- Standardize and strengthen the language in construction contracts between KU and KUMC to the extent feasible.
- Embed audit language in all future construction contracts.
- Engage a professional Construction Audit group who can review past projects and audit current projects
- Work with the head of Risk Management to align insurances and bonds and create guidelines for contractors that take advantage of KU's buying power. (Note the sourcing group will actually create the umbrella contracts on Risk Management's behalf).

Anticipated Results

- Enhanced due diligence and financial control for major capital construction
- Decreased risks and increased compliance to KU contract terms and pricing
- A portfolio approach to the acquisition of insurance and performance bonds
- Elimination of duplicate insurance and unnecessary bonding. Return of bond premiums to KU as appropriate.
- **Approximately \$2.2M in NPV savings for the University once fully implemented**

Update – Phase II findings: construction management best practices

Leverage a best practice Master Plan to optimize construction spending, plan deferred maintenance and increase self-performed work.

Findings

- There are strong elements of self-performed work on each campus, however, the business practices are approached differently.
- The ability to respond quickly is highly valued by internal customers.
- Self-performed work provides a labor cost advantage in the 20%+ range.
- KU spends approximately \$10M on specialty contractors per year. In the last 2 years KU and KUMC used 29 specialty contractors (7 roofing, 4 Electrical, 4 HVAC and 14 other contractors).
- KU and KUMC's master plans have not been revised in several years, are developed independently of one another, do not include infrastructure considerations and are not at a level of detail to allow for proactive planning.

Proposed Solution

- Update campus master plans immediately to include infrastructure and sufficient detail to enable proactive planning
- Develop KU construction team (at Lawrence campus) modeled on KUMC's Jayhawk Construction with a goal of increasing self-performed work by 30% and meeting the timeliness requirements of core academic and research departments
- Expand the "on-call" contractor program to cover roofing, HVAC and other routine and continuous renovation / project needs
- Create a multi-disciplinary team to map and redesign the current process for building /renovating lab space for researchers.

Anticipated Results

- A Master Plan that supports strategic thinking and an increased level of building component standardization.
- KU Construction will deliver projects 20% less expensively than using outside contractors.
- An ability to respond in a more timely fashion for core academic and research needs
- **Approximately \$4.1M in NPV savings for the University over the next five years**

Financial model – notes and assumptions

A series of assumptions were required to estimate the financial impact of implementing cross campus construction.

Notes	Assumptions
<p>Model is driven from KU and KUMC AP and PCard data for FY2009 and FY2010. The baseline period is assumed to be the average of these two years.</p> <p>Construction data was sorted into the following sub-categories for analysis:</p> <ul style="list-style-type: none">• General contractors• Specialty contractors• Professional Fees• Insurance and Bonds• Other <p>Model assumes the following costs as % of spend for general and specialty contractors:</p> <ul style="list-style-type: none">• Labor = 47%• Materials = 40%• Insurance & Bonds = 3%• Overhead and Profit = 10%	<p>Professional fees are assumed to be 90% labor and 10% overhead and profit</p> <p>The model assumes that benefits have specific ramp up periods</p> <p>The model does not assume any change in management staff although the attrition of long-tenured staff and the possible consolidation of the KU and KUMC departments make this a possibility</p> <p>Strategic sourcing savings are modeled for material costs and professional fees only, not labor costs.</p> <p>Strategic sourcing savings to existing maintenance and repair costs are not assumed, but likely to positively impact KU and KUMC</p>

Actual benefits will depend on the final decisions regarding program scope and degree of outside assistance, but the following model provides directional guidance as to the scope of the efficiencies.

Financial model – construction strategic sourcing

The expected benefits case examines a case for the University to source a substantial percentage of the materials purchased currently by various contractors

Expected Case (\$000's) (assumes 6% material savings rate)

Benefits	FY12	FY13	FY14	FY15	FY16
Cost Savings	\$392	\$1,569	\$1,569	\$1,569	\$1,569
Total	\$392	\$1,569	\$1,569	\$1,569	\$1,569
Costs					
Staff and Fringe	\$61	\$246	\$246	\$246	\$246
Total	\$61	\$246	\$246	\$246	\$246
Net	\$331	\$1,323	\$1,323	\$1,323	\$1,323

Low Benefits Case (assumes 4% material savings rate)

Net Present Value **\$4.0M**

High Benefits Case (assumes 8% material savings rate)

Net Present Value **\$7.1M**

Net Present Value (Expected Benefits Case): \$5,448,000

Financial model – financial management

The expected benefits case examines an opportunity to operate at best practices for construction auditing and risk management practices (insurance / bonds)

Expected Case (\$000's)

(assumes 1% audit recovery and 10% improvement in insurance / bond costs)

Benefits	FY12	FY13	FY14	FY15	FY16
Cost Savings	\$250	\$501	\$501	\$501	\$501
Total	\$250	\$501	\$501	\$501	\$501
Costs					
Staff and Fringe	\$0	\$0	\$0	\$0	\$0
Total	\$0	\$0	\$0	\$0	\$0
Net	\$250	\$501	\$501	\$501	\$501

Low Benefits Case

(assumes 0.5% audit recovery and 8% improvement on insurance/bonds cost)

Net Present Value **\$1.4M**

High Benefits Case

(assumes 1.5% audit recovery and 12% improvement on insurance and bonds cost)

Net Present Value **\$2.9M**

Net Present Value (Expected Benefits Case): \$2,185,000

Financial model – construction management

The expected benefits case examines an opportunity to expand the amount of self performed construction and renovation work

Expected Case (\$000's)

(assumes a 4% labor cost improvement on work currently done by general and specialty contractors)

Benefits	FY12	FY13	FY14	FY15	FY16
Cost Savings	\$0	\$1,063	\$1,063	\$1,063	\$1,063
Total	\$0	\$1,063	\$1,063	\$1,063	\$1,063
Costs					
Staff and Fringe	\$0	\$0	\$0	\$0	\$0
Total	\$0	\$0	\$0	\$0	\$0
Net	\$0	\$1,063	\$1,063	\$1,063	\$1,063

Low Benefits Case

(assumes 2.5% labor cost improvement for work currently done by general and specialty contractors, and 6% savings on deferred construction)

Net Present Value **\$3.3M**

High Benefits Case

(assumes 5.5 % labor cost improvement for work currently done by general and specialty contractors, and 10% savings on deferred construction)

Net Present Value **\$5.6M**

Net Present Value (Expected Benefits Case): \$4,115,000

Risk assessment summary

There are three risks for consideration: (1) negative impacts to contractor relationships, (2) change management challenges in deploying best practices across all campuses and (3) political / community concerns of doing more work internally

- Many of Huron's recommendations regarding the sourcing of construction materials will change current business practices and may incur pushback from the contractor community. However, Huron and KU both recognize that improving contractor relationships is a real possibility and is a goal of the program. When fully implemented, KU should be working with a smaller pool of more qualified contractors who are strategic partners to the University.
- There are many good business practices in place at both KU and KUMC. However, there isn't a mechanism currently to design and deploy best practices across campuses. The typical change management risks of trying to improve practices across multiple and diverse constituencies will be present.
- The state and/or local contractor community may believe there is an implied contract with the University that allows them to always bid for University business. Huron believes this potential will still exist, but the University will be more involved in the process and demanding in terms of qualifications and multi-year deals.

These risks can be addressed through communication and project planning activities and will not be a significant hurdle to the success of this implementation. Creating an advisory board with cross campus and customer perspectives will help manage and mitigate these risks. Significant dialogue and communication with contractors is planned to implement these concepts effectively.

Approach – construction strategic sourcing

The table below depicts the high level tasks necessary to implement business centers.

Mobilize	Design	Deploy Sourcing	Deploy other initiatives
Oct 2011. – Nov. 2011	Nov. 2011 – Dec. 2012	Jan. 2012 – Jun. 2012	Jun. 2012 – Jun. 2013
<p>Tasks</p> <ul style="list-style-type: none"> • Create business cases • Develop frameworks for implementation • Develop communication plan • Establish implementation timeframe • Estimate implementation budget 	<p>Tasks</p> <ul style="list-style-type: none"> • Create Construction Strategic Sourcing team, including hiring as needed • Integrate sourcing waves with Procurement’s sourcing • Create KPIs for evaluating Sourcing success • Define and identify members of the Advisory Group • Develop the KU Construction Management approach • Execute communication plan • Finalize Category plans 	<p>Tasks</p> <ul style="list-style-type: none"> • Begin Construction Auditing • Execute sourcing efforts on all construction spend • Establish baseline KPIs • Execute communication plan • Begin soliciting feedback from Advisory Group • Design KU Construction • Identify Masterplan advisor/consultant 	<p>Tasks</p> <ul style="list-style-type: none"> • Create KU Construction • Create Masterplan • Execute the communication plan • Begin rationalizing insurances and bonds • Reassess KPIs
<p>Deliverables</p> <ul style="list-style-type: none"> • Business case • Executive committee decision 	<p>Deliverables</p> <ul style="list-style-type: none"> • Sourcing Wave plan • Sourcing KPIs • Advisory Group charter and members assigned 	<p>Deliverables</p> <ul style="list-style-type: none"> • Sourcing Savings • KU Construction design • Masterplan best practices 	<p>Deliverables</p> <ul style="list-style-type: none"> • Masterplan • KU Construction

The detailed implementation plan, provided as a MS Project Plan, details the individuals responsible for each of the tasks involved in the next steps implementation plan.



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