

# 9<sup>TH</sup> Annual

## Vorys Economic Development Incentives Conference

Co-Presented by Vista Site Selection

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**VORYS**

**VISTA SITE SELECTION**

# Speaker Info

**Matthew T. Samler**  
Senior Managing Director  
Vista Site Selection

**Christopher J. Magill**  
Managing Director  
Vista Site Selection

**Evan L. Stair**  
Managing Director – Analytics  
Vista Site Selection

**Geoffrey J. Troan**  
Managing Director  
Vista Site Selection

**Janie S. Hanna** >>>>  
Economic Development Manager  
Vista Site Selection

# DATA. ANALYTICS. INCENTIVES.

Subtitle

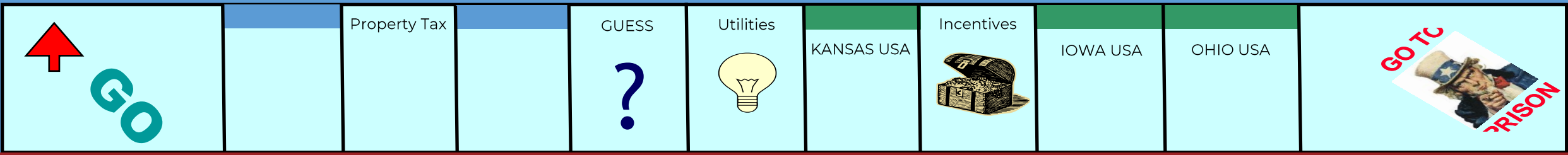


# Part 1: The Economic Multiplier Effect

**Pharmaceuticals Sector Version**

**Game Host: Jeff Troan**

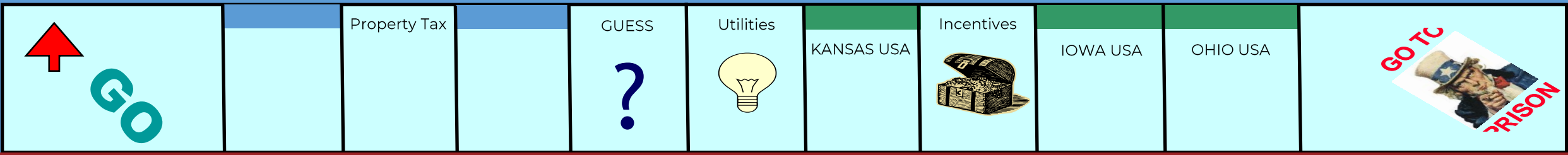
**The public and private sector entities portrayed in this economic simulation game are entirely fictional, any similarity to names, trademarks or entities is purely coincidental.**



## The Multiplier Effect

### At the end of this lesson, you should be able to:

- ▶ Understand how direct pharmaceutical jobs generate up to three induced and indirect jobs in the regional economy
- ▶ Understand that a new pharmaceuticals payroll is spent multiple times in the local economy
- ▶ Understand that tax is incurred based on investment, ownership, sales transactions, business franchise and business income
- ▶ Understand that taxed transactions accumulate to the benefit of state and local government



# The Multiplier Effect

**CONSOLIDATED  
PHARMACEUTICALS**

Major Pharmaceutical  
Research Company



Construction

*Wiley*   
**Artificially Intelligent Software**

Our Software  
Company



Retail Services



State and Local  
Government



Automotive



Subcontract  
Manufacturers



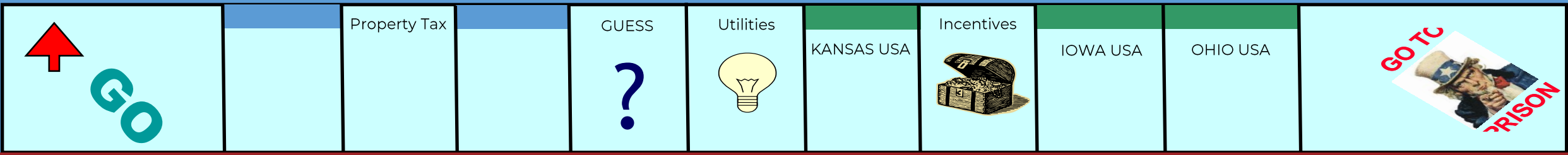
Industrial Trades



Labor



Banking Industry



# The Multiplier Effect



Major  
Pharmaceutical  
Research  
Company

**CONSOLIDATED  
PHARMACEUTICALS**

**\$23**

State and Local  
Government



**\$6**

Banking  
Industry

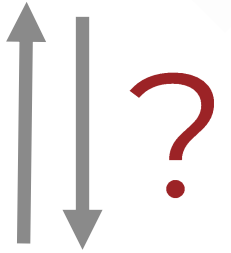


**\$10**

		Property Tax		GUESS 	Utilities 	KANSAS USA	Incentives 	IOWA USA	OHIO USA	
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## The Multiplier Effect

**Wiley**   
 Artificially Intelligent Software



State and Local  
Government



### Community Coffers

State and Local Government  
pledges \$3 support to Wiley-AIS  
on Consolidated  
Pharmaceuticals bid.

		Property Tax		GUESS 	Utilities 	KANSAS USA	Incentives 	IOWA USA	OHIO USA	
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The Multiplier Effect

**CONSOLIDATED PHARMACEUTICALS**

Major Pharmaceutical Research Company

↓  
**\$20**

**Wiley**   
Artificially Intelligent Software



*Community Coffers*

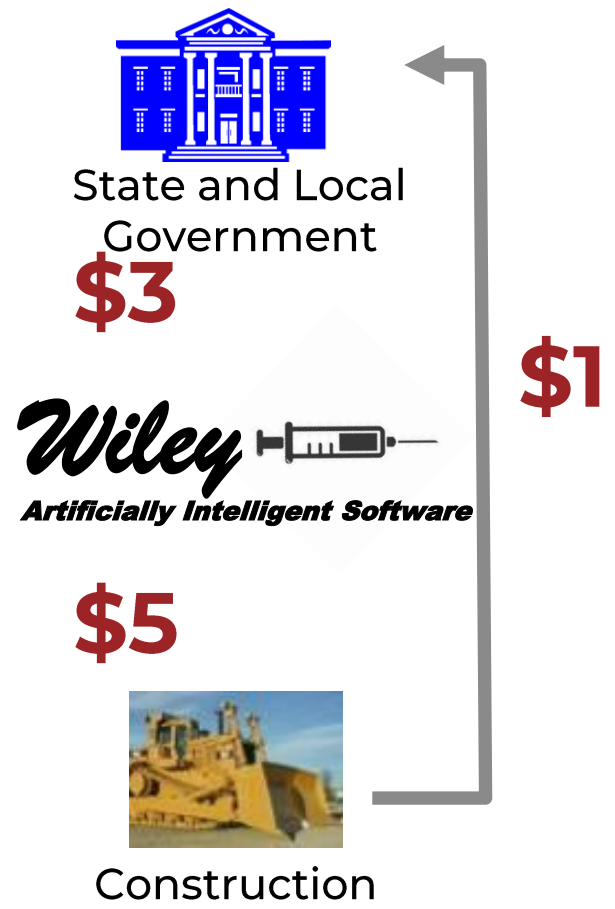

Congratulations!

Wiley-AIS wins a new Fixed Price Incentive Fee contract to develop DNA Software for Consolidated. Consolidated pays Wiley \$20.



	Property Tax	GUESS 	Utilities 	KANSAS USA	Incentives 	IOWA USA	OHIO USA	
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The Multiplier Effect

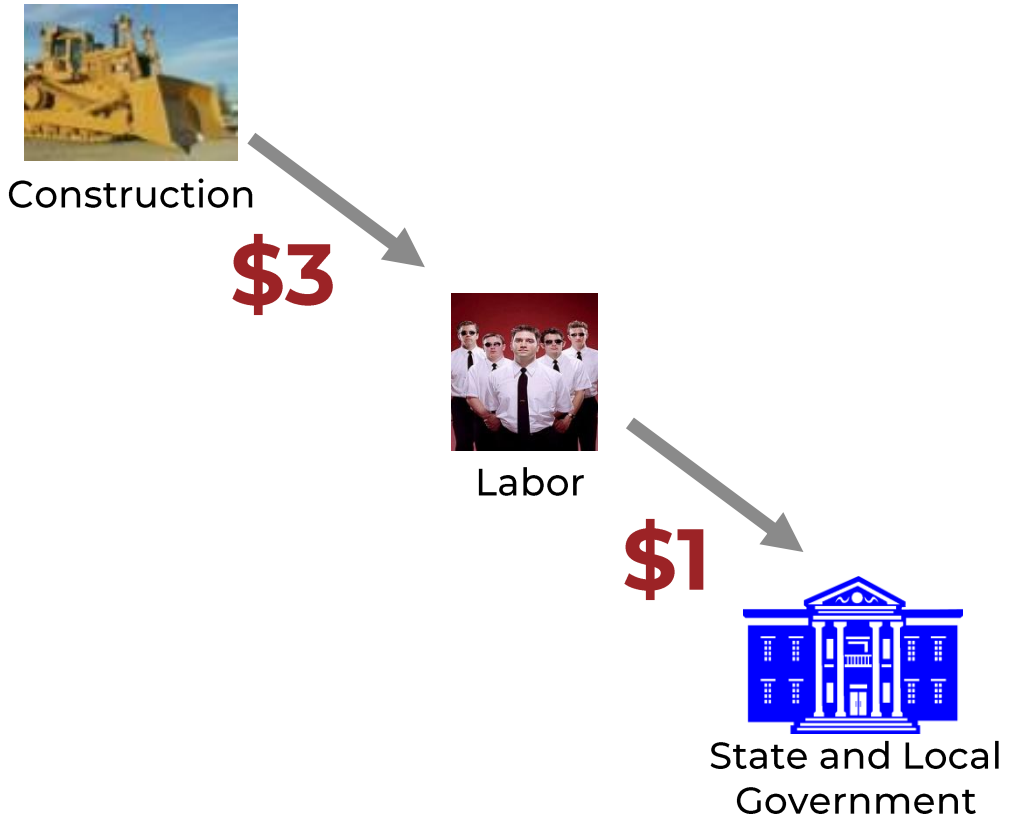



*Community Coffers*

Wiley-AIS constructs infrastructure for contract. State pays Wiley \$3 incentive and Wiley pays Construction \$5 (State gets \$1 in sales and property tax).

	Property Tax	GUESS 	Utilities 	KANSAS USA	Incentives 	IOWA USA	OHIO USA	
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# The Multiplier Effect



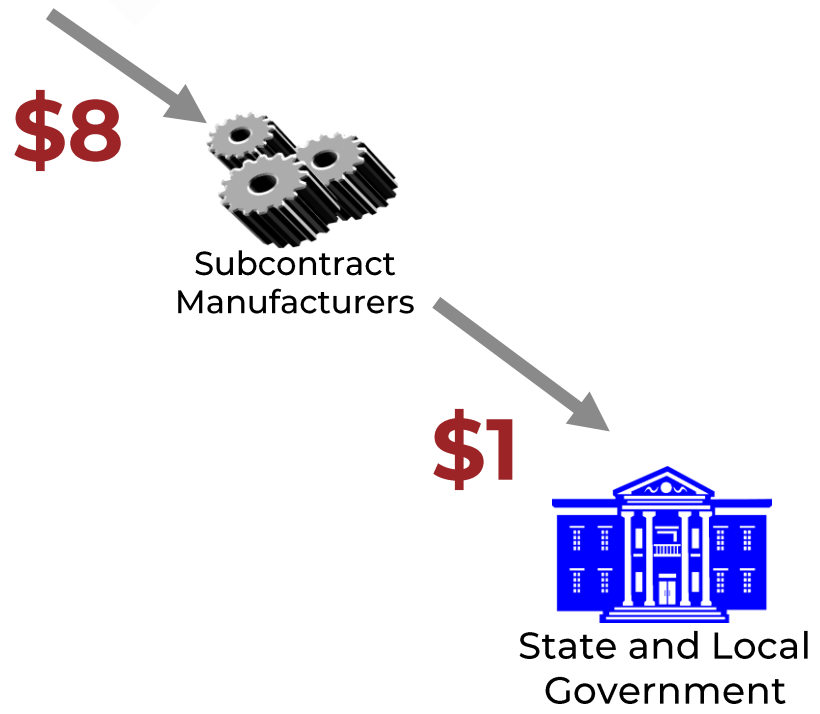

## Community Coffers

Construction pays Labor \$3 for services performed building Wiley-AIS infrastructure (State gets \$1 in wage and income tax).

		Property Tax		GUESS 	Utilities 	KANSAS USA	Incentives 	IOWA USA	OHIO USA	
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# The Multiplier Effect

**Wiley**  
Artificially Intelligent Software



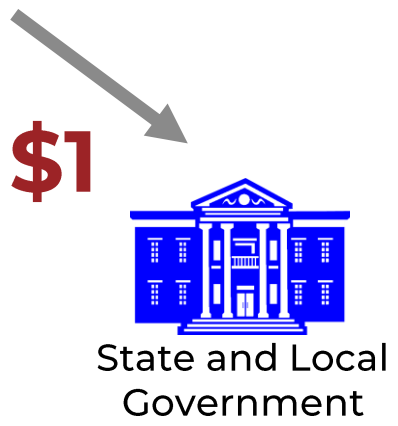
## Community Coffers


Wiley-AIS pays Subcontractors for Work completed/undertaken \$8  
(State gets \$1 franchise tax).

		Property Tax		GUESS 	Utilities 	KANSAS USA	Incentives 	IOWA USA	OHIO USA	
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# The Multiplier Effect

*Wiley*  
Artificially Intelligent Software



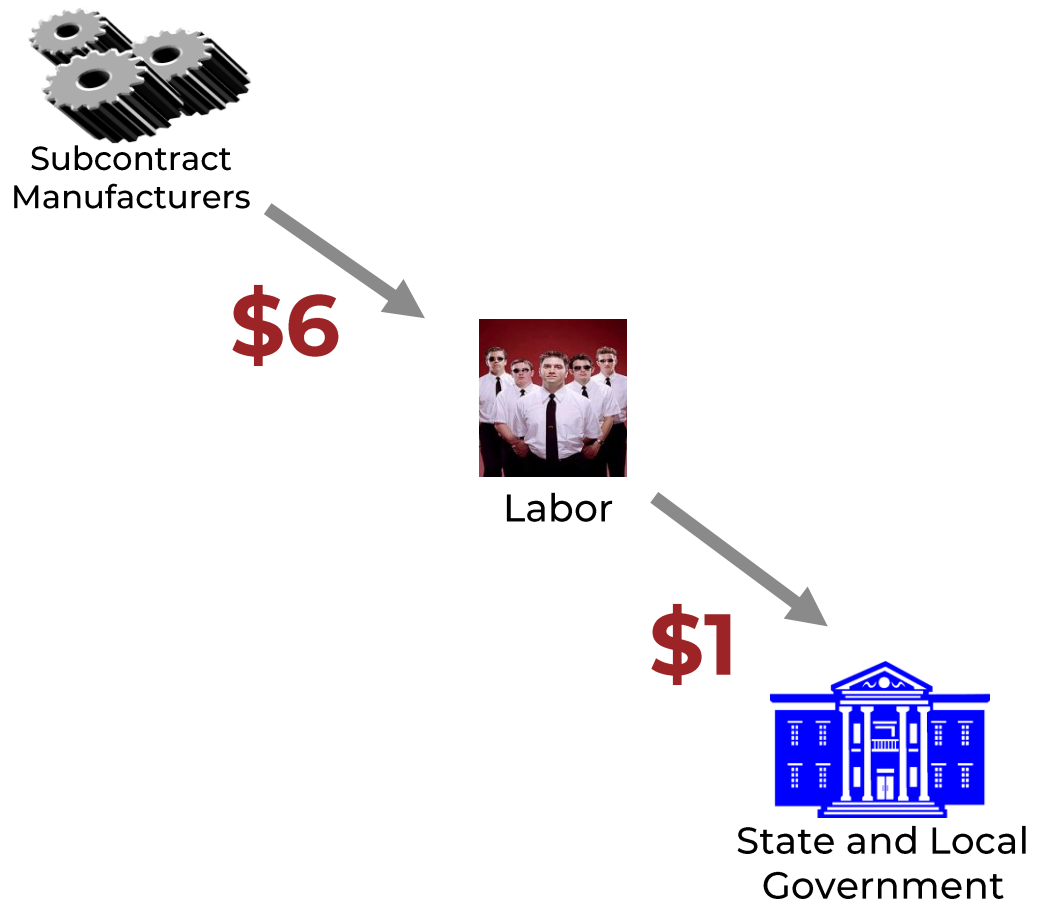



## Community Coffers

Wiley-AIS pays Its employees \$4  
(State gets \$1 in wage and income tax).

		Property Tax		GUESS 	Utilities 	KANSAS USA	Incentives 	IOWA USA	OHIO USA	
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# The Multiplier Effect

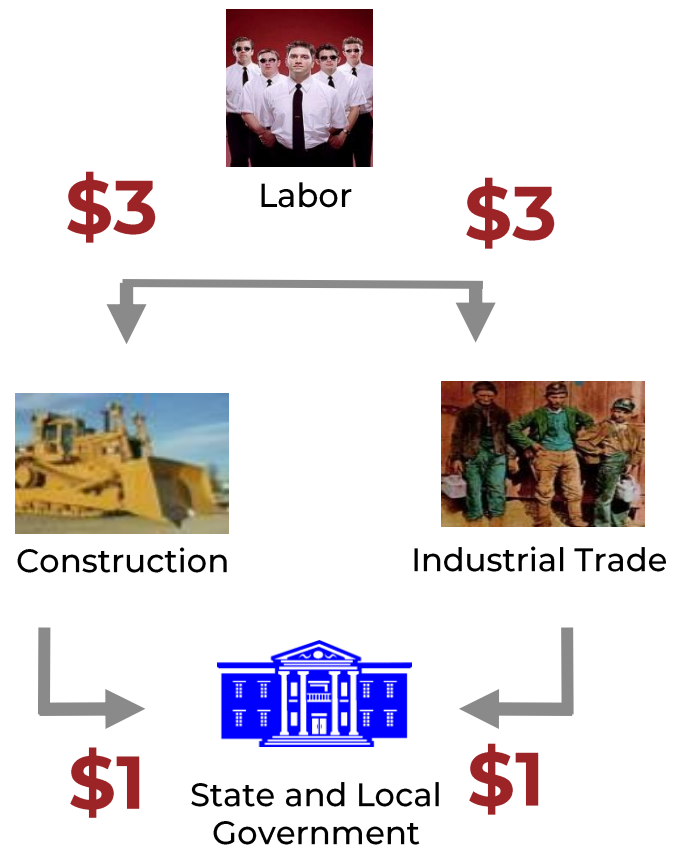



## Community Coffers

Subcontractors pay their employees \$6 (State gets \$1 in wage and income tax).

	Property Tax	GUESS 	Utilities 	KANSAS USA	Incentives 	IOWA USA	OHIO USA	
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# The Multiplier Effect




## Community Coffers

Seeing a thriving economy, Labor buys/refurbishes houses \$6. Pay Construction \$3 and Trades \$3 (State gets \$2 in franchise tax from construction and trades).



**\$4** Labor **\$4**



Retail Services

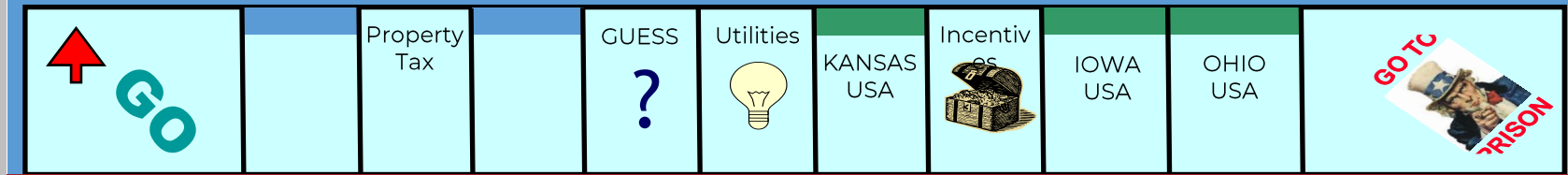


Industrial Trade



State and Local Government

**\$1** **\$1**



## The Multiplier Effect

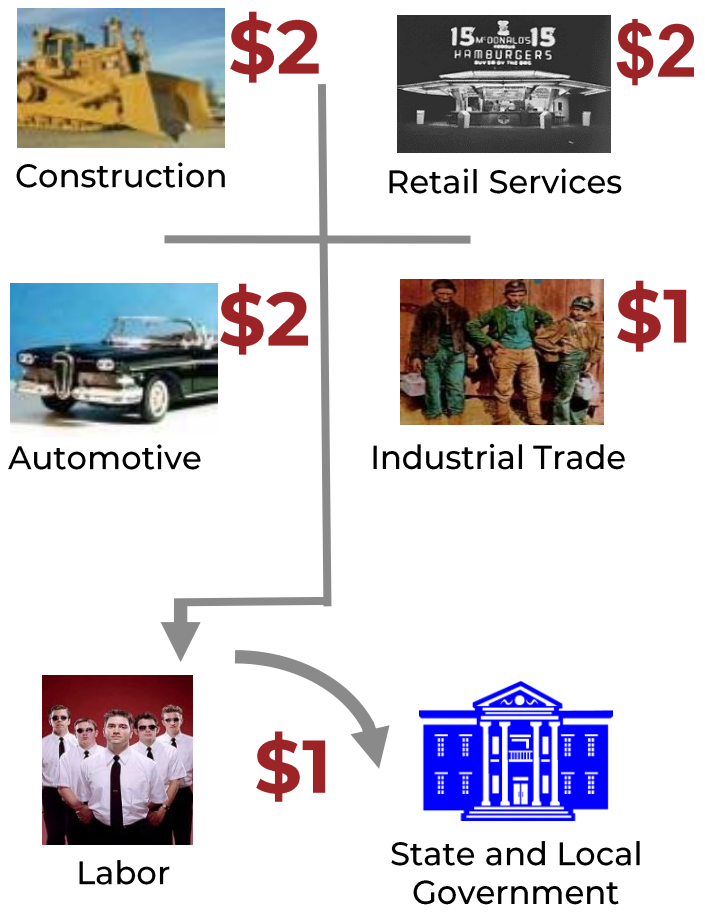


### Community Coffers

Labor feels great about the local economy. Workers spend a day on the town...buy on credit \$8!  
 Labor pays Retail \$4 and Automotive \$4 (State gets \$2 in sales and franchise tax).

	Property Tax	GUESS 	Utilities 	KANSAS USA	Incentives 	IOWA USA	OHIO USA	
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## The Multiplier Effect



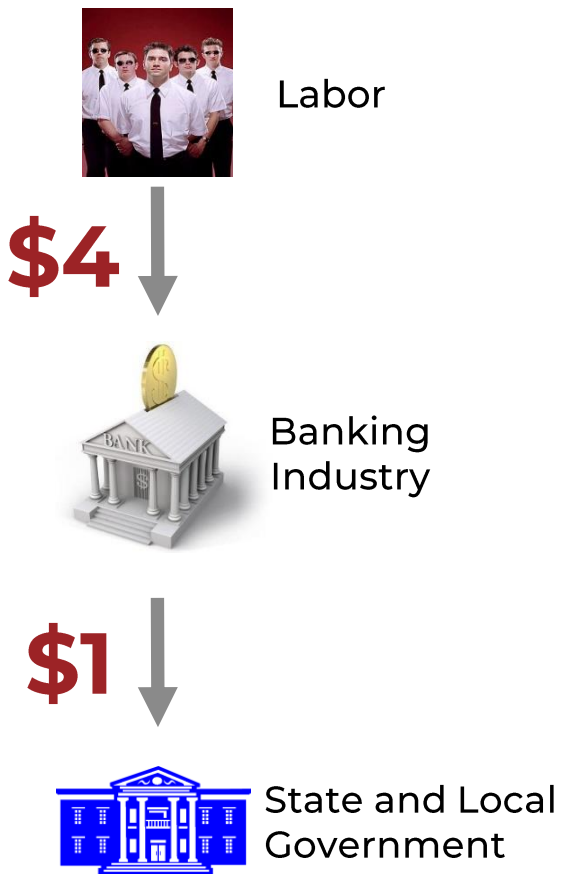

### Community Coffers

Induced Sectors pay their workers \$7. Construction pays \$2, Retail \$2, Automotive \$2, and Trades \$1 (State gets \$1 in wage and income tax).




	Property Tax	GUESS 	Utilities 	KANSAS USA	Incentives 	IOWA USA	OHIO USA	
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## The Multiplier Effect



\$4




*Community Coffers*

Labor pays off half its credit cards, \$4. (State gets \$1 in franchise tax from the issuing bank).

		Property Tax		GUESS 	Utilities 	KANSAS USA	Incentives 	IOWA USA	OHIO USA	
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## The Multiplier Effect

### Community Coffers

Wiley-AIS successfully completes the project, and great cost performance allows them to expand the scope to Consolidated.

Consolidated awards Wiley-AIS \$3 incentive fee.

# Conclusions

## The Multiplier Effect

	US Treasury Seeds the Economy	Wiley-AIS Negotiates Incentive Package with State and Local Government	Wiley-AIS wins Federal Government Contract	State Issues Grant to Wiley-AIS	Wiley-AIS Builds Project Infrastructure	Construction Pays its Laborers	Wiley-AIS Pays its Subcontractors	Wiley-AIS Pays its Employees	Subcontractors Pay their Employees	Labor Buys New Houses and Improves the Ones they Own	Labor Borrows on Credit	Labor Spends a Day on the Town	Induced Sectors Pay Their Labor	Labor Pays of Halfits Credit Card Balance	Wiley-AIS Beats the Target Cost	Consolidated Pays Wiley-AIS the Incentive Fee	End of Simulation Totals
<b>Consolidated Pharmaceuticals</b>	\$ 23		\$(20)												\$-	\$ (3)	\$ -
<b>State and Local Government</b>	\$ 6	\$-		\$ (3)	\$ 1	\$ 1	\$ 1	\$ 1	\$ 1	\$ 2		\$ 2	\$ 1	\$ 1			\$ 14
<b>Banking Industry</b>	\$ 10										\$ (8)			\$ 3			\$ 5
<b>Wiley Aerospace</b>		\$-	\$ 20	\$ 3	\$ (5)		\$ (8)	\$ (4)							\$-	3	\$ 9
<b>Wiley Subcontractors</b>							\$ 7		\$ (6)								\$ 1
<b>Construction</b>					\$ 4	\$ (3)				\$ 2			\$ (2)				\$ 1
<b>Retail Services</b>												\$ 3	\$ (2)				\$ 1
<b>Automotive</b>												\$ 3	\$ (2)				\$ 1
<b>Industrial Trades</b>										\$ 2			\$ (1)				\$ 1
<b>Labor</b>						\$ 2		\$ 3	\$ 5	\$ (6)	\$ 8	\$ (8)	\$ 6	\$ (4)			\$ 6
<b>Totals</b>	\$ 39	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$-	\$ 39

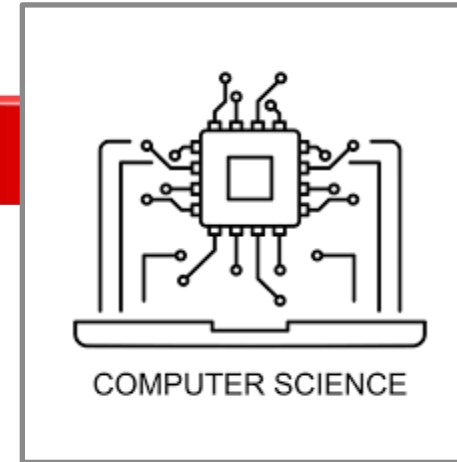
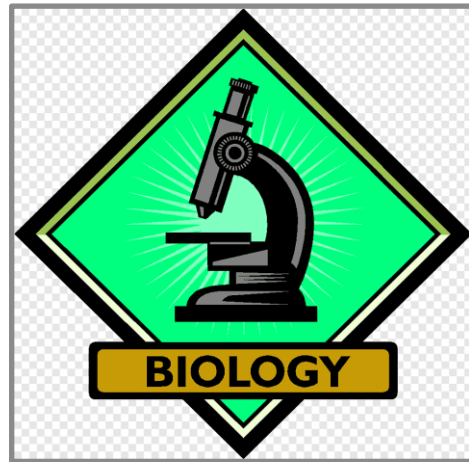


# Part 2: Introduction: Software Development for the Healthcare Industry

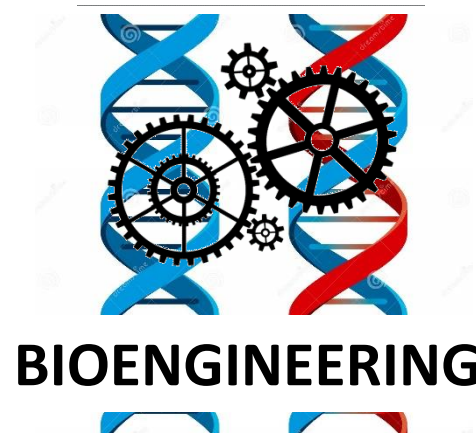
**Matt Samler**  
**Vista Site Selection**



# Biology Meets Computer Science

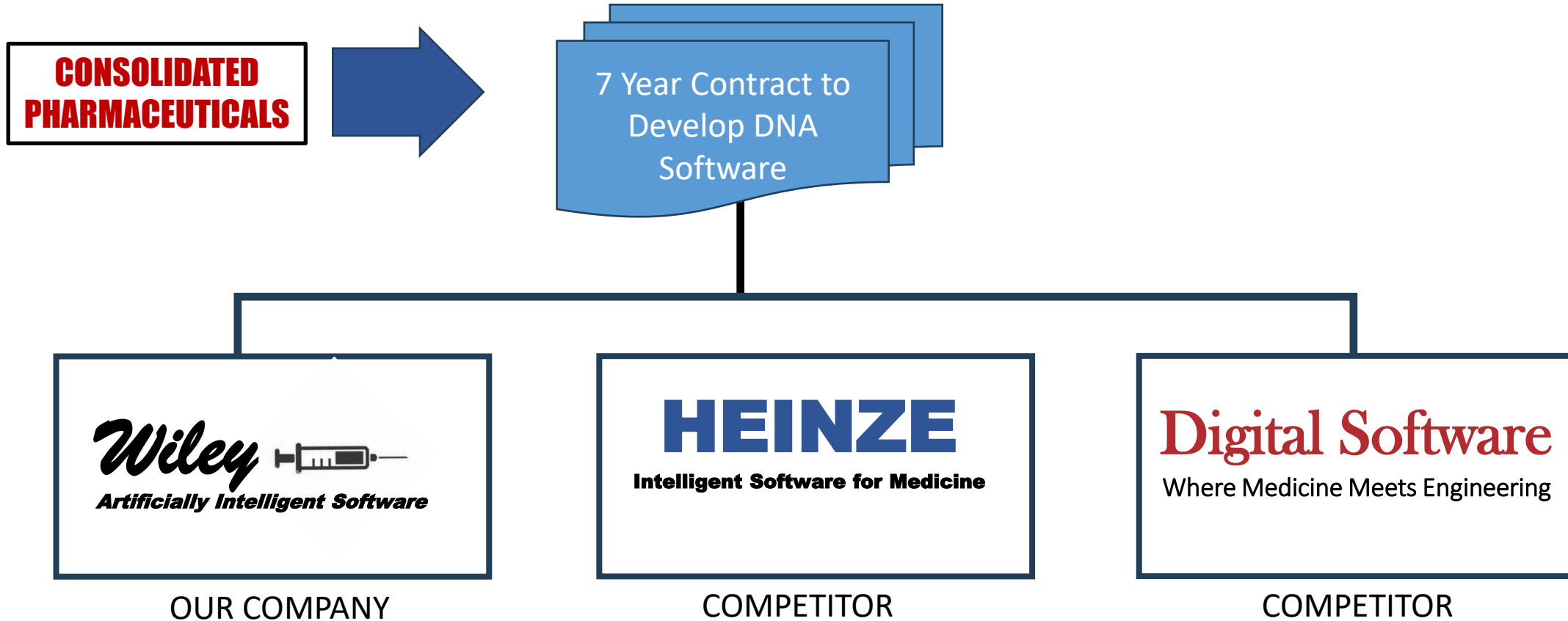


- *Accelerate effective treatment protocols and their FDA approval by comparing DNA structures to known pathogens.*
- *Determine weak points in the pathogen's DNA structure to kill or sterilize the organism.*

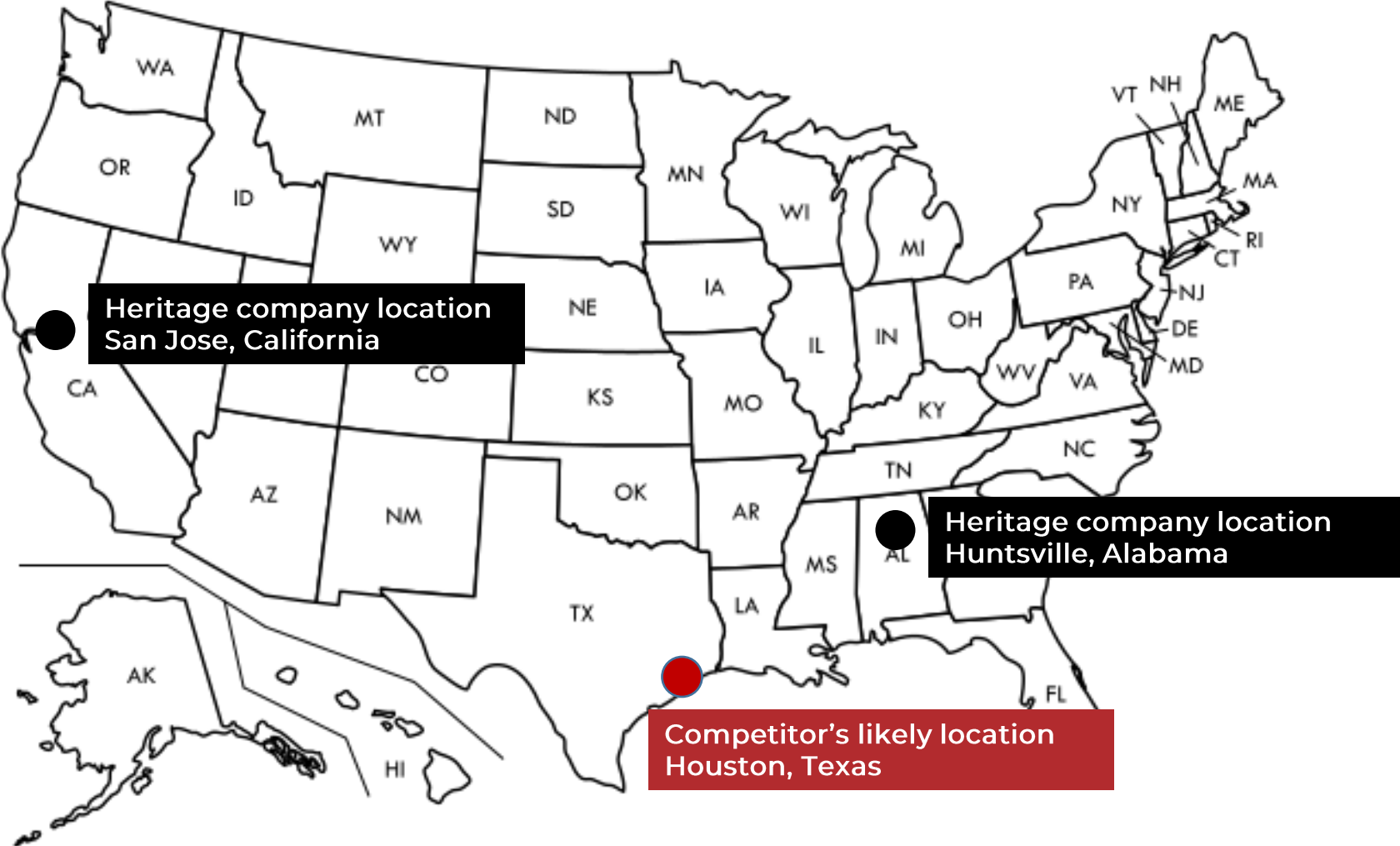


*Consolidated Pharmaceuticals is looking to subcontract a contract to an AI Software Vendor. The project scope is to create software to analyze the DNA of emerging pathogens, developing a correlation to known pathogens DNA patterns, to enhance the process of developing anti-virals to kill the pathogens.*

# Competition for the Work



# Heritage Infrastructure Locations



# The Scope of the Work

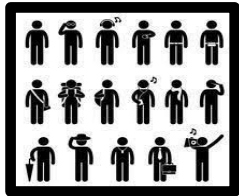
Headcount estimates		Headcount
Senior Software Developer	60%	233
Junior Software Developer	40%	155
Systems Engineers	10%	39
Engineering Managers		10
Production Engineering		-
Factory Touch		-
Quality Inspection		20
Quality Engineering		5
Production Control		-
Contract Technical Requirements		5
Contracts		2
Master Planning		10
Finance		5
Program Manager		1
Program Manpower		485

- ▶ Program will take 7 years to complete.
- ▶ Estimated contract value is \$1.0B USD.
- ▶ Capex is estimated at \$18.5M for equipment + a building.



# Building the Cost Advantage

**WE ARE GOING TO GENERATE A COST ADVANTAGE ON THESE COMPETING FIRMS BY...**



**A:** *Lowering our labor costs though Advanced Analytics*



**B:** *Reducing our Investment and Operating Costs through the use of business and workforce development incentives*



**VIA...**

**Analytic Site Selection Techniques**



# Part 3: What is the Economic Impact of the Project?

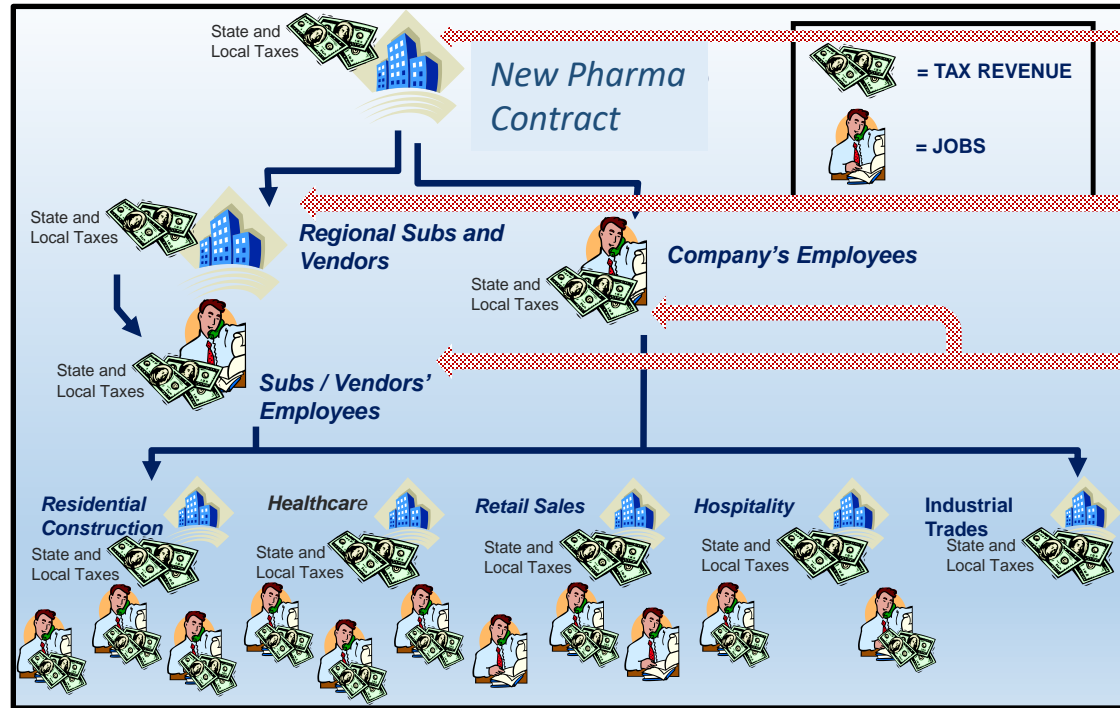
**Chris Magill**  
**Vista Site Selection**



# The Value of the EIS

- ▶ An understanding of the public sector's view of the business model for negotiations
- ▶ Increased business incentives because the multiplier has been defined
- ▶ An internal EIS model can be used to compel the public sector to release its project EIS
- ▶ Bid, Technical Volume enhancement
- ▶ Define the cap, for the amount of incentives you can reasonably request

# Economic Impact Analysis



**Direct** – an “event” that may include industry job creation, capital investment or industry sales, among others.

**Indirect** – impacts from business-to-business transactions resulting from the project (i.e. supplier activity).

**Induced** – the spending of labor income resulting from the project by households (i.e. supplier activity).

The Economic Impact Study is a means of quantifying the direct, indirect, and induced economic growth from a project using parameters set forth by the federal and/or state government.

# Economic Impact Analysis

- Direct Jobs
- Direct Avg. Salary
- Direct Capital Investment
- Industry

## Model Input Variables



Chosen EIS Model



- Types of Models (Economic Events):**
- Industry output Most common
  - Industry employment Most common
  - Industry compensation
  - Industry impact analysis
  - Industry contribution analysis
  - Commodity output
  - Household income
  - Industry spending pattern
  - Institutional spending pattern
  - Multi-regional input-output analysis

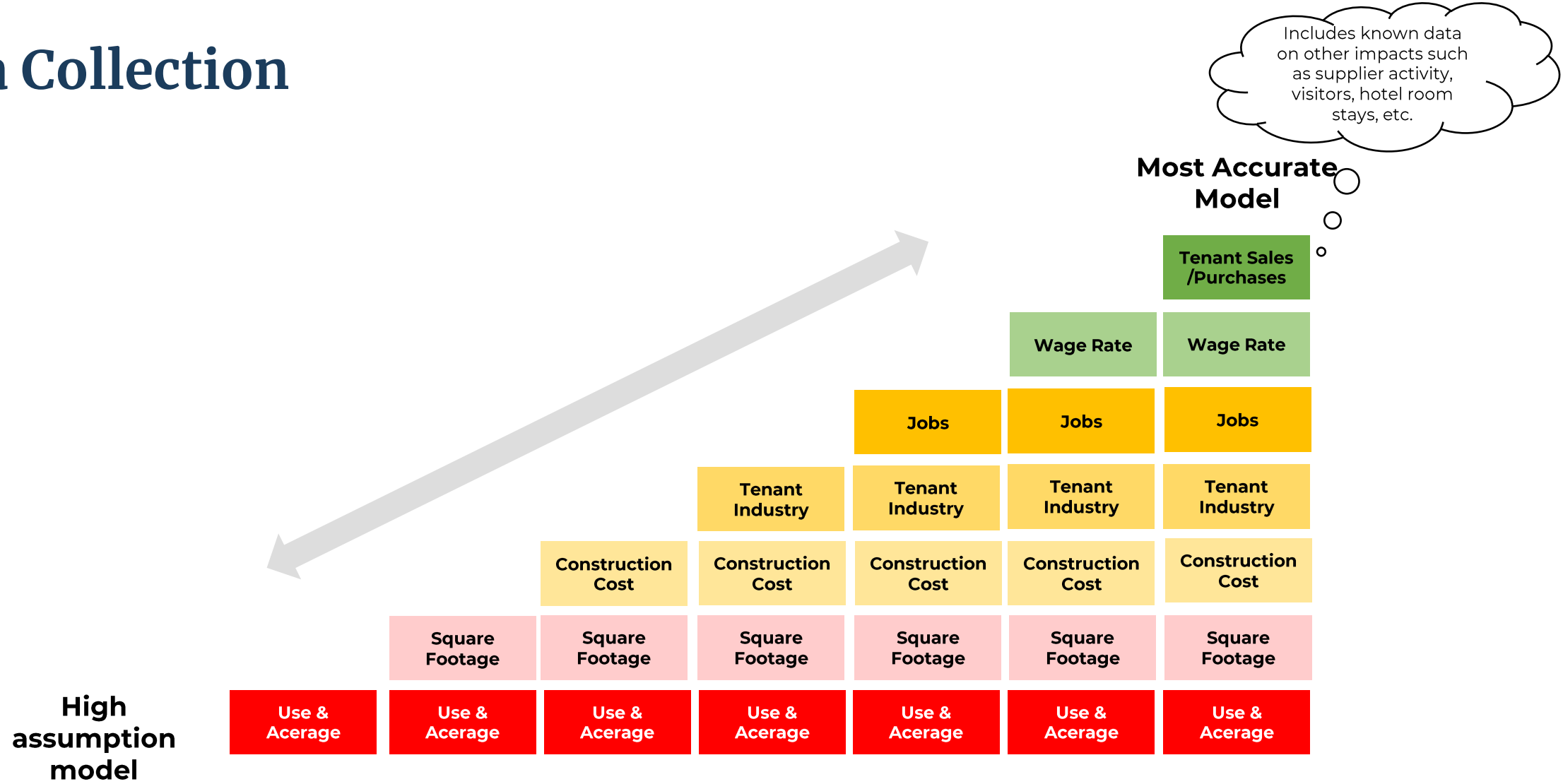
## Results/Output



Direct	Indirect	Induced (by Sector)
<ul style="list-style-type: none"> <li>• Direct payroll</li> <li>• Direct sales</li> <li>• Direct taxation</li> <li>• Direct GDP impact</li> </ul>	<ul style="list-style-type: none"> <li>• Indirect jobs</li> <li>• Indirect avg. salary</li> <li>• Indirect payroll</li> <li>• Indirect capital investment/sales</li> <li>• Indirect taxation</li> <li>• Indirect GDP impact</li> </ul>	<ul style="list-style-type: none"> <li>• Induced jobs</li> <li>• Induced avg. Salary</li> <li>• Induced payroll</li> <li>• Induced sales</li> <li>• Induced capital invest.</li> <li>• Induced taxation</li> <li>• Induced GDP impact</li> </ul>

**Result terms**  
*(Economic "Street Names"):*  
 "Value Added" = GDP  
 "Output" = Sales

# Data Collection



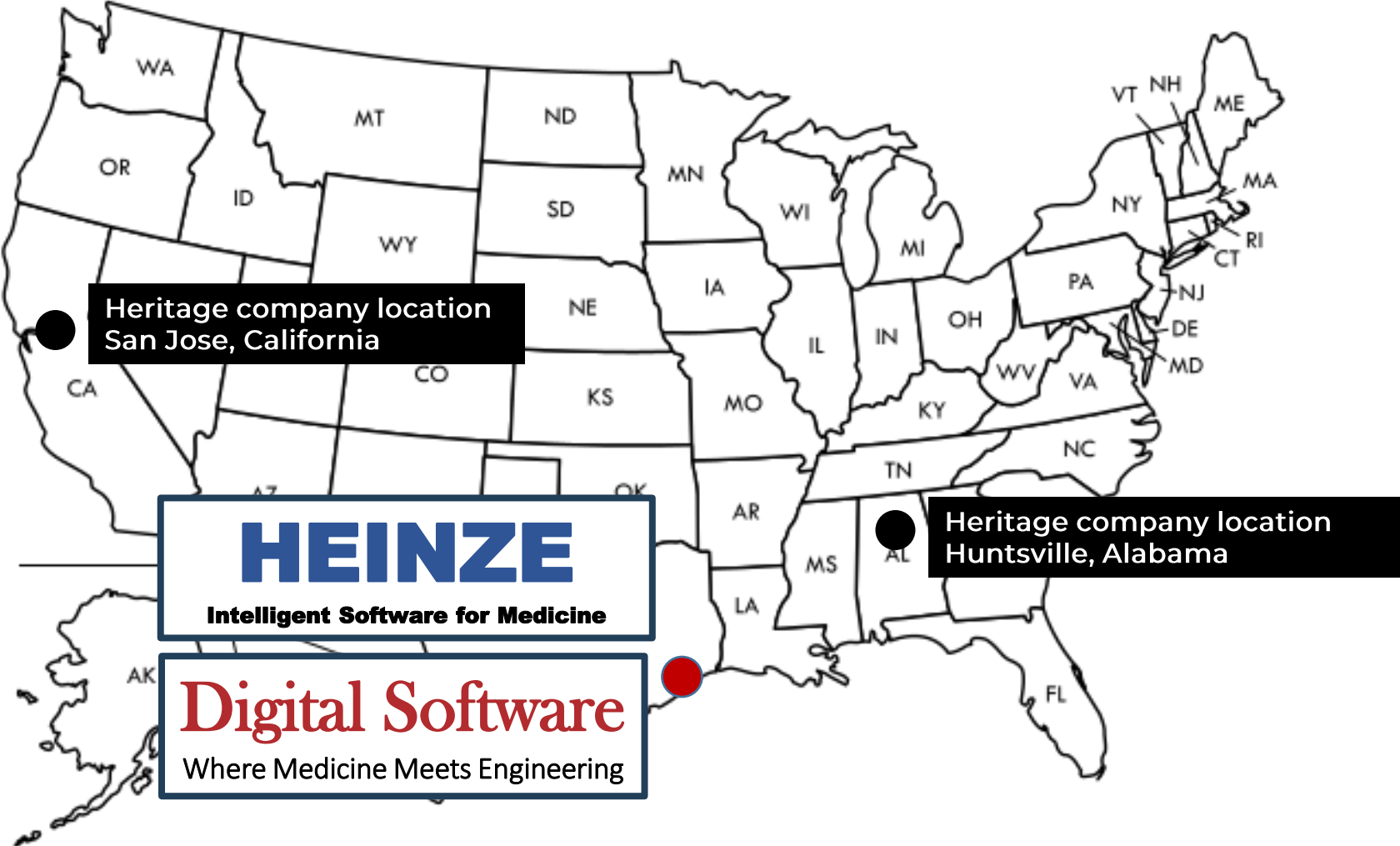


# Part 4: Examining the Competition – What is the Competition Likely to Bid?

**Jeff Troan and Janie Hanna**  
**Vista Site Selection**



# Both Competitors are Located in Houston, Texas





# Advanced Analytics

Proprietary credit card database



Proprietary cell phone location database



U.S. Bureau of Labor statistics databases



Various state labor statistics databases



Proprietary national utility grid database



U.S. census database



U.S. Department of Transportation database



Additional databases accessed by customer requirements



**Vista Site Selection Proprietary Data-Mart**



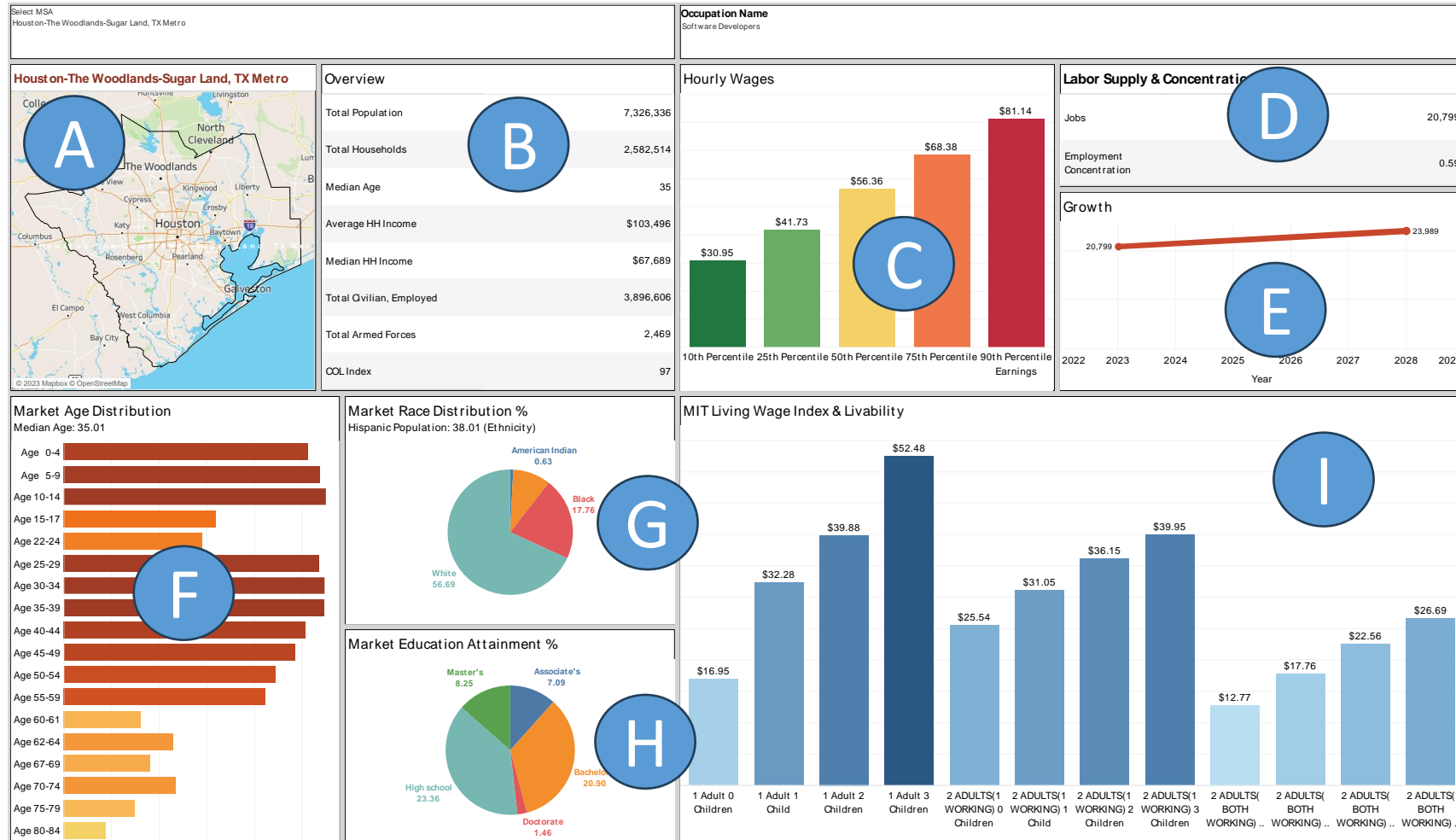
*Vista Site Selection data analysis and reduction*



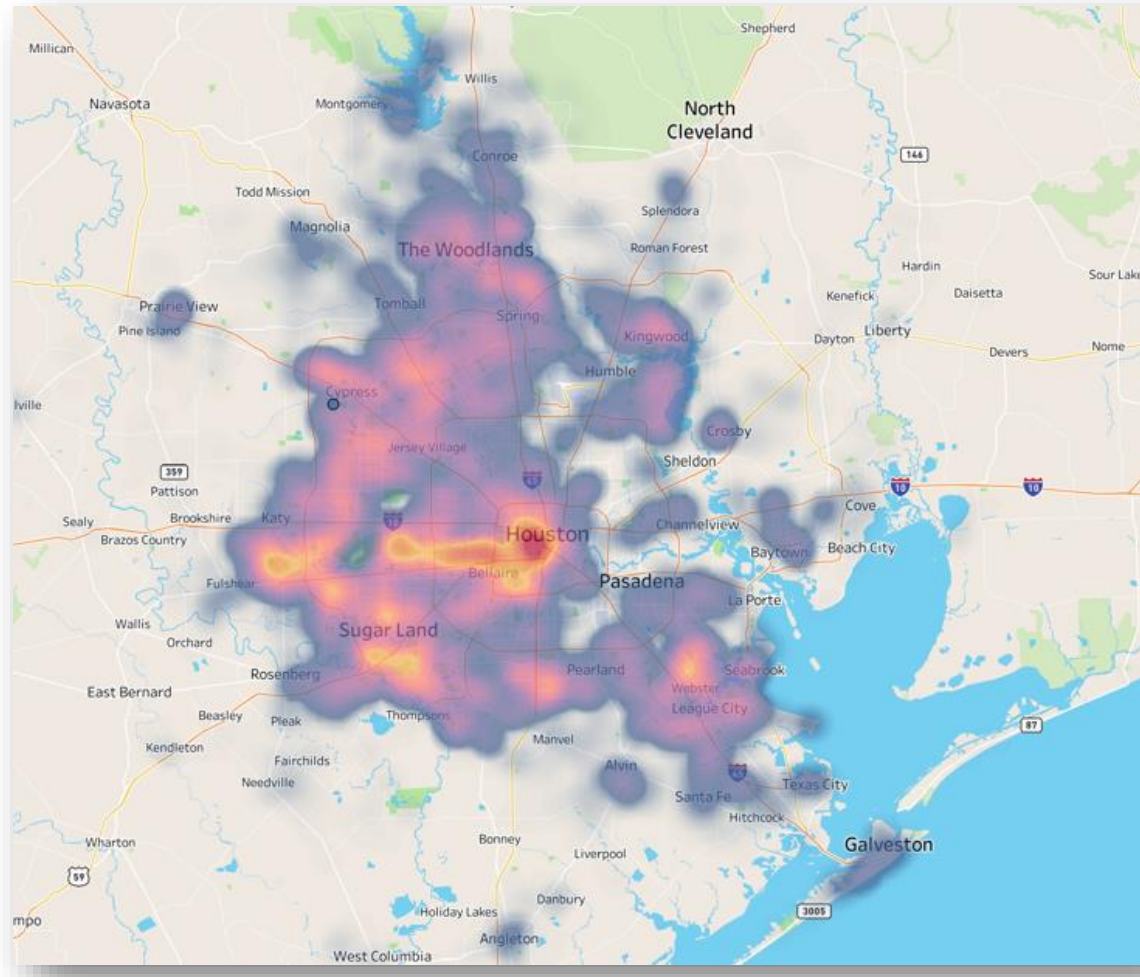
# What is the Price to Win?



# Houston Demographics



# Houston Heat Map



# Conclusions

- ▶ Both competing companies are paying at the 75th percentile for software developers.
- ▶  $\$68.38 \times 388 \text{ software developers} \times 2,080 \text{ hrs/yr} \times 7 \text{ years} = \text{payroll of } \$386.3\text{M}$  for this labor class.
- ▶  $\$386.3\text{M payroll for labor class} \times 120\% \text{ engineering overhead and } 18\% \text{ General \& Administrative overhead} = \$1,002.8\text{M bid cost}$  for this labor category.



# Part 5: Looking at Company Heritage Sites and Optimal Greenfield Sites

**Evan Stair**  
**Vista Site Selection**



# Heritage Infrastructure Locations



Heritage company location  
San Jose, California

Heritage company location  
Huntsville, Alabama

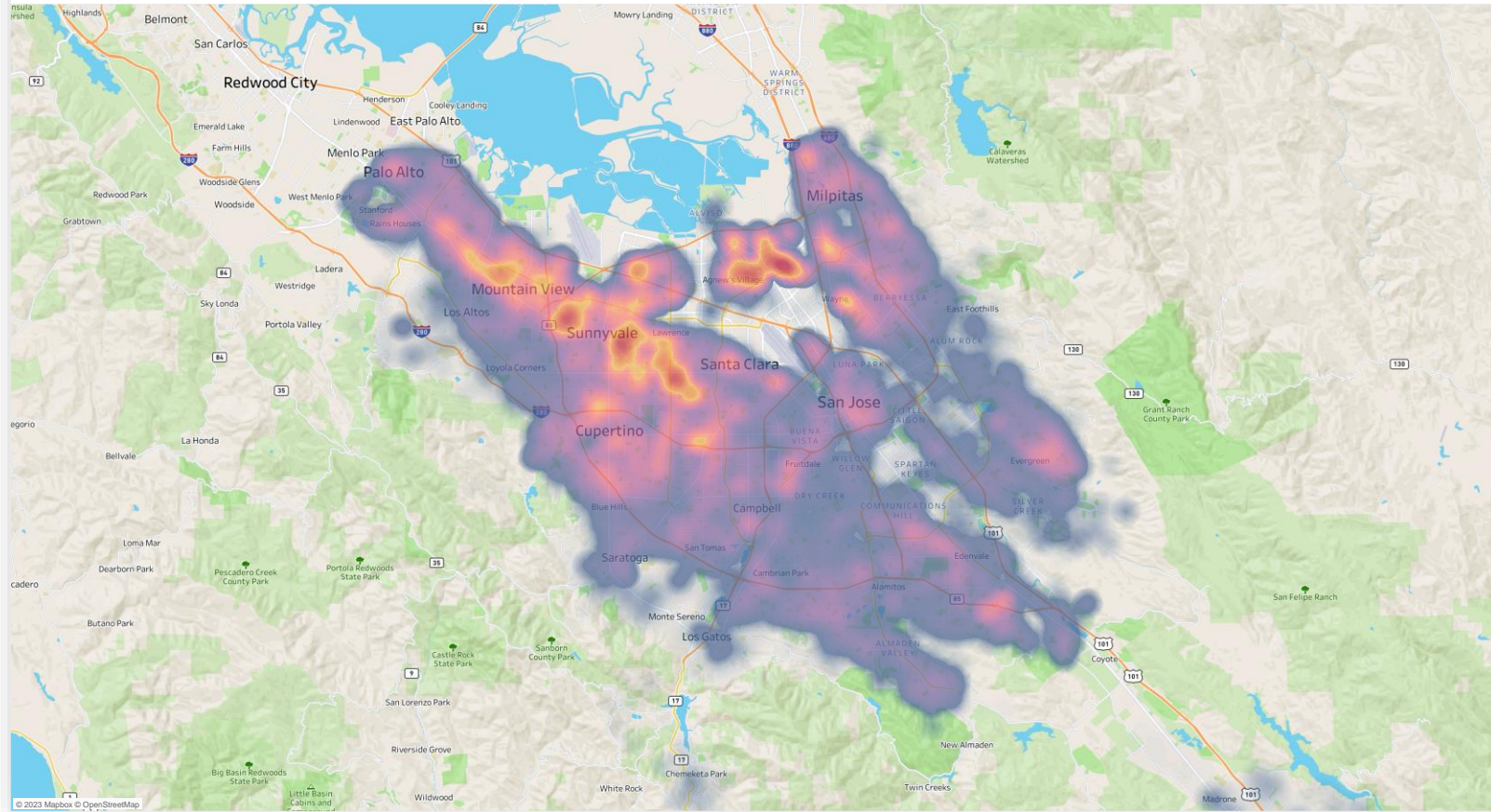
# San Jose Demographics





# San Jose Demographics

Software Developers  
Heat Map

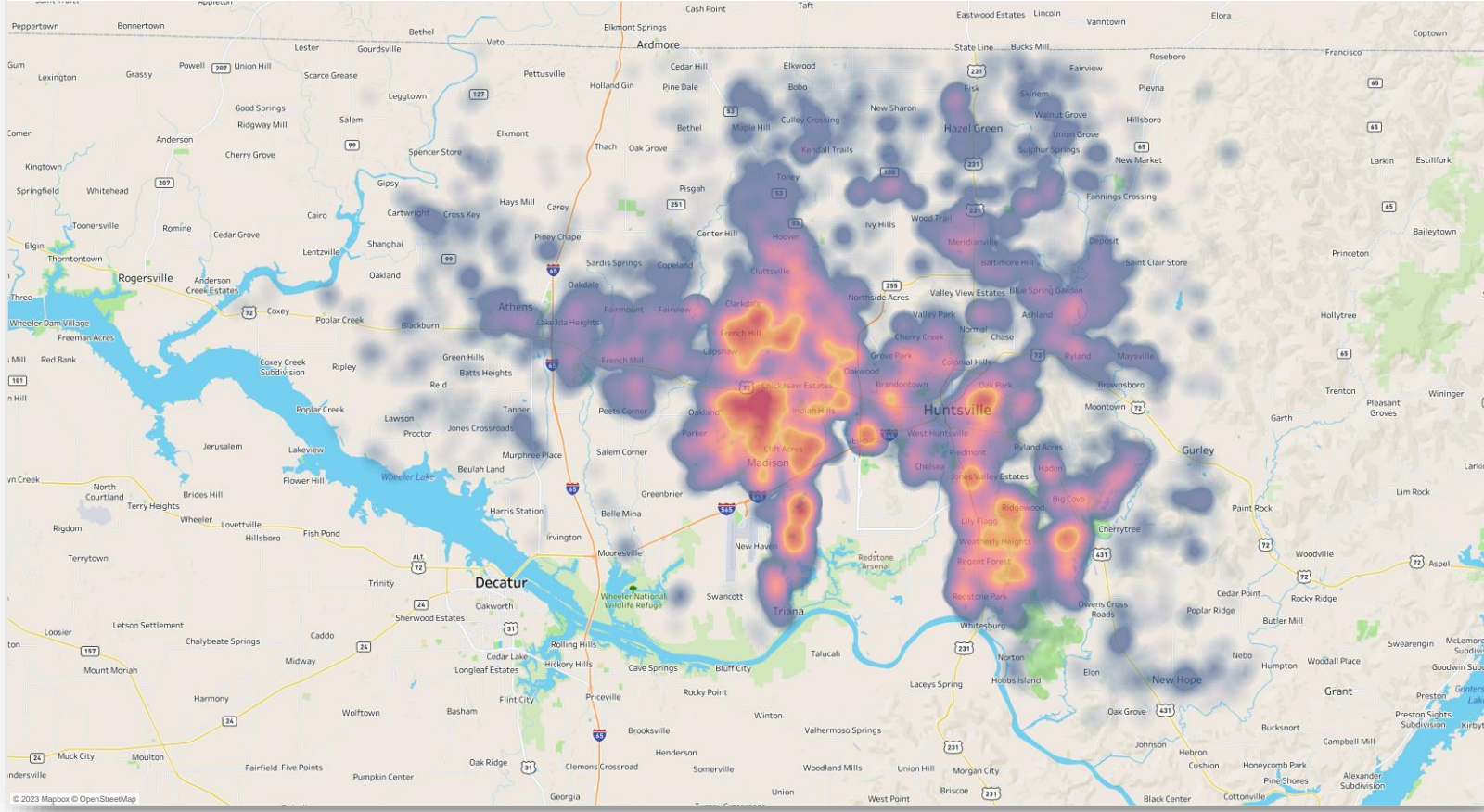


# Huntsville Demographics



# Huntsville Demographics

Software Developers  
Heat Map

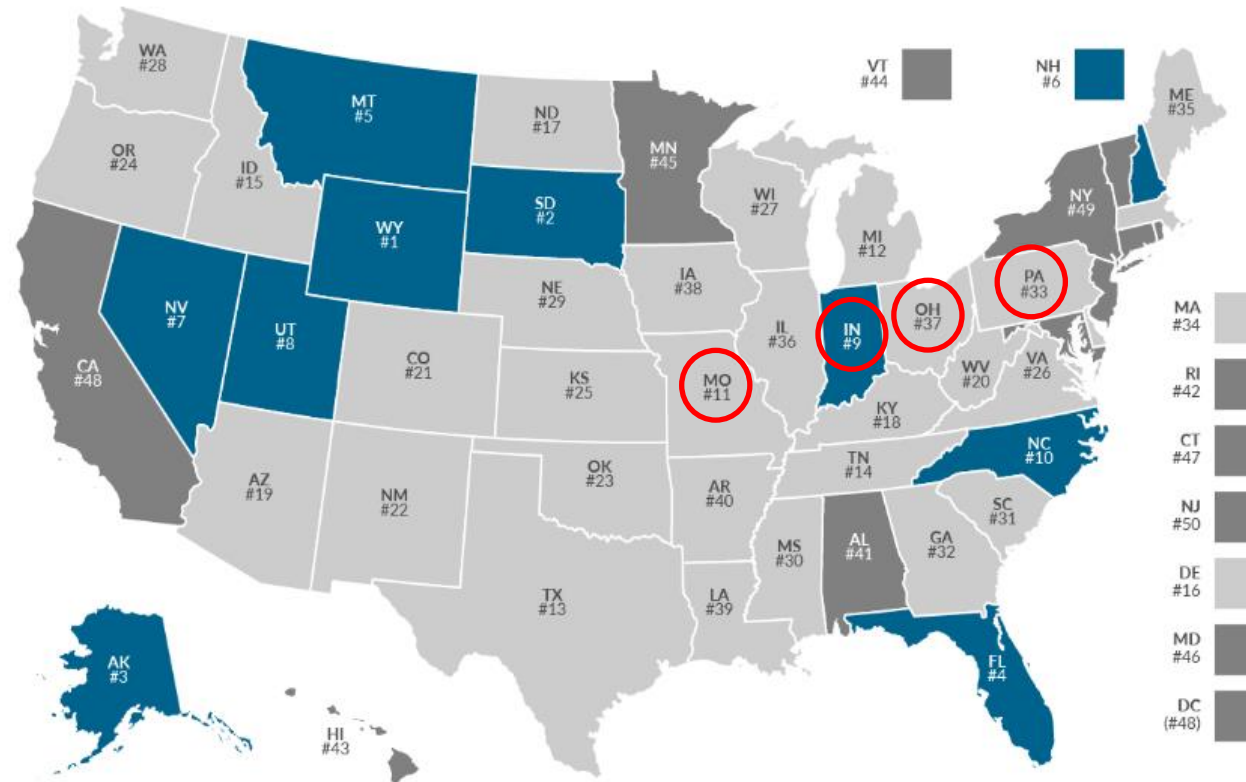


# Top 4 Cities with Matching Labor Demographics

## Best Ranking Cities

- 1) Indianapolis, Indiana
- 2) Cincinnati, Ohio/Kentucky
- 3) Pittsburgh, Pennsylvania
- 4) Kansas City, Missouri/Kansas

# Underlying Tax Climates



Note: A rank of 1 is best, 50 is worst. D.C.'s score and rank do not affect other states. The report shows tax systems as of July 1, 2022 (the beginning of Fiscal Year 2023). Source: Tax Foundation.

■ 10 Best Business Tax Climates  
■ 10 Worst Business Tax Climates

# Factoring in Business Climate

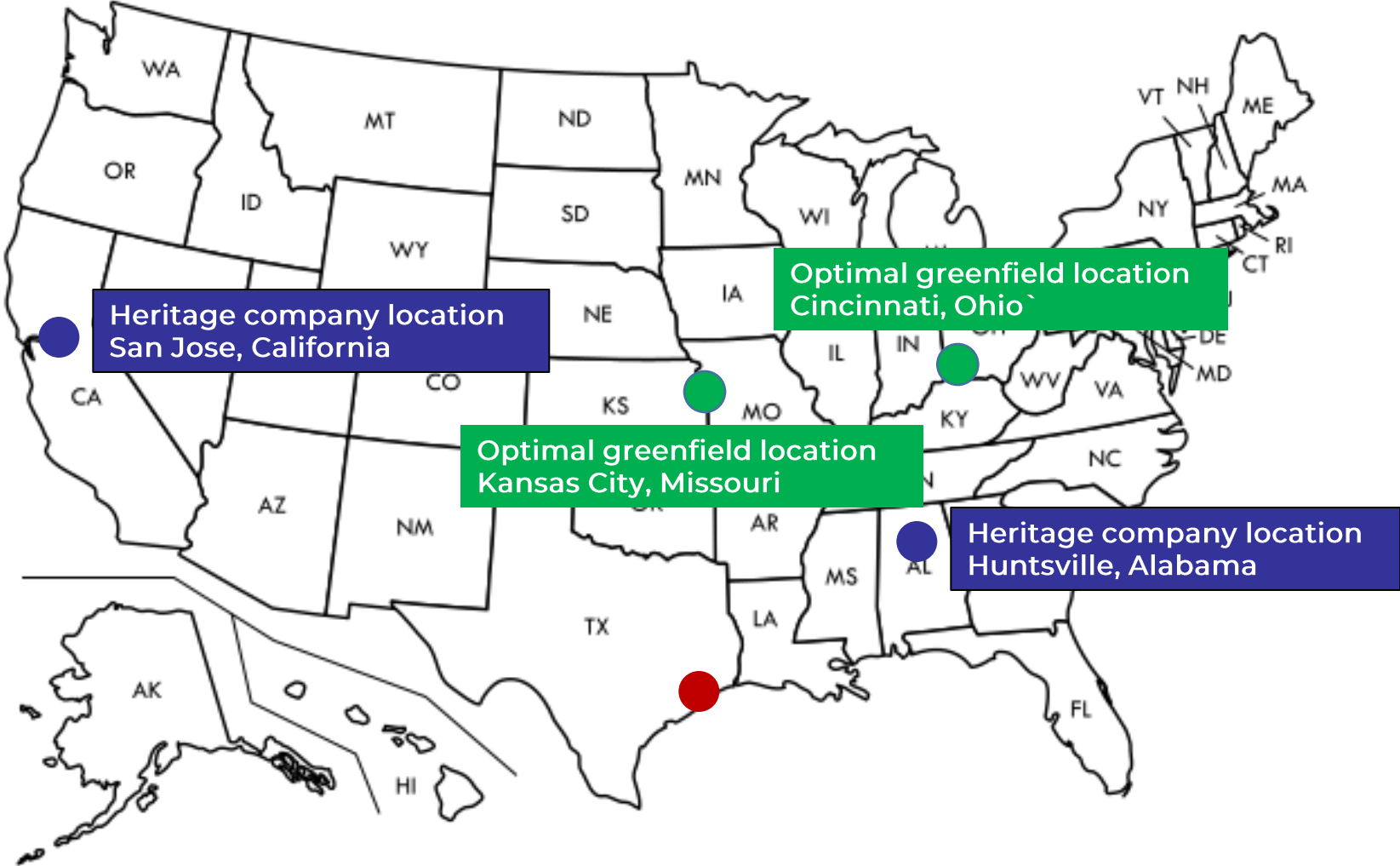
City (MSA)	Baseline Tax Climate	Business Incentives Climate
Indianapolis Indiana	9	Limited
Cincinnati Ohio / Kentucky	37 / 18	Aggressive / Limited
Pittsburgh Pennsylvania	33	Limited
Kansas City Missouri / Kansas	11 / 25	Aggressive / Aggressive

# Factoring in Business Climate

City (MSA)	Baseline Tax Climate	Business Incentives Climate
Indianapolis Indiana	9	Limited
Cincinnati Ohio / Kentucky	37 / 18	Aggressive / Limited
Pittsburgh Pennsylvania	33	Limited
Kansas City Missouri / Kansas	11 / 25	Aggressive / Aggressive

- **Taking into account taxes and incentives:**
  - *Kansas City looks like a good location*
  - *Cincinnati is in the pack and aggressive with incentives*
  - *These two sites also offer the opportunity to solicit incentives from two states, as their MSAs cross state lines*

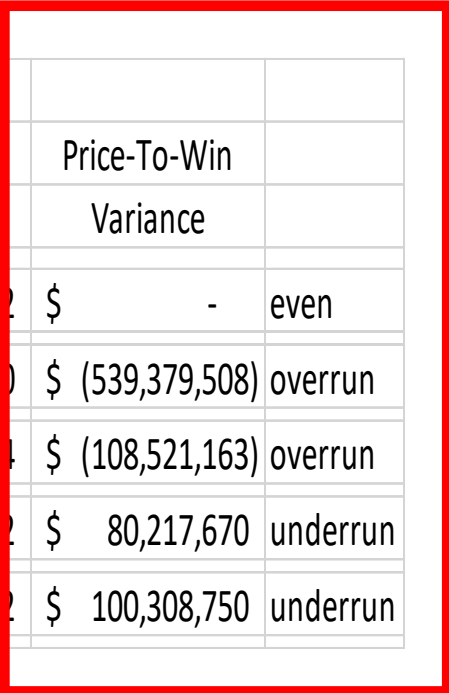
# Final Sites for the Site Selection Matrix





# Reviewing the Labor Costs

Software Developers	Hiring Percentile	Basis	Hourly Cost	Cost Per Employee / Year	Annual Project Payroll	7 Year Project Payroll	7 Year Project Burdened	Price-To-Win Variance	
Houston, TX	75th	Analytics	\$ 68.38	\$ 142,230	\$ 55,185,395	\$ 386,297,766	\$ 1,002,794,202	\$ -	even
San Jose, CA	62nd	Actual	\$ 105.16	\$ 218,733	\$ 84,868,326	\$ 594,078,285	\$ 1,542,173,710	\$ (539,379,508)	overrun
Huntsville, AL	82nd	Actual	\$ 75.78	\$ 157,622	\$ 61,157,491	\$ 428,102,438	\$ 1,111,315,364	\$ (108,521,163)	overrun
Cincinnati, OH/KY	75th	Analytics	\$ 62.91	\$ 130,853	\$ 50,770,886	\$ 355,396,205	\$ 922,576,532	\$ 80,217,670	underrun
Kansas City, MO/KS	75th	Analytics	\$ 61.54	\$ 128,003	\$ 49,665,242	\$ 347,656,691	\$ 902,485,452	\$ 100,308,750	underrun



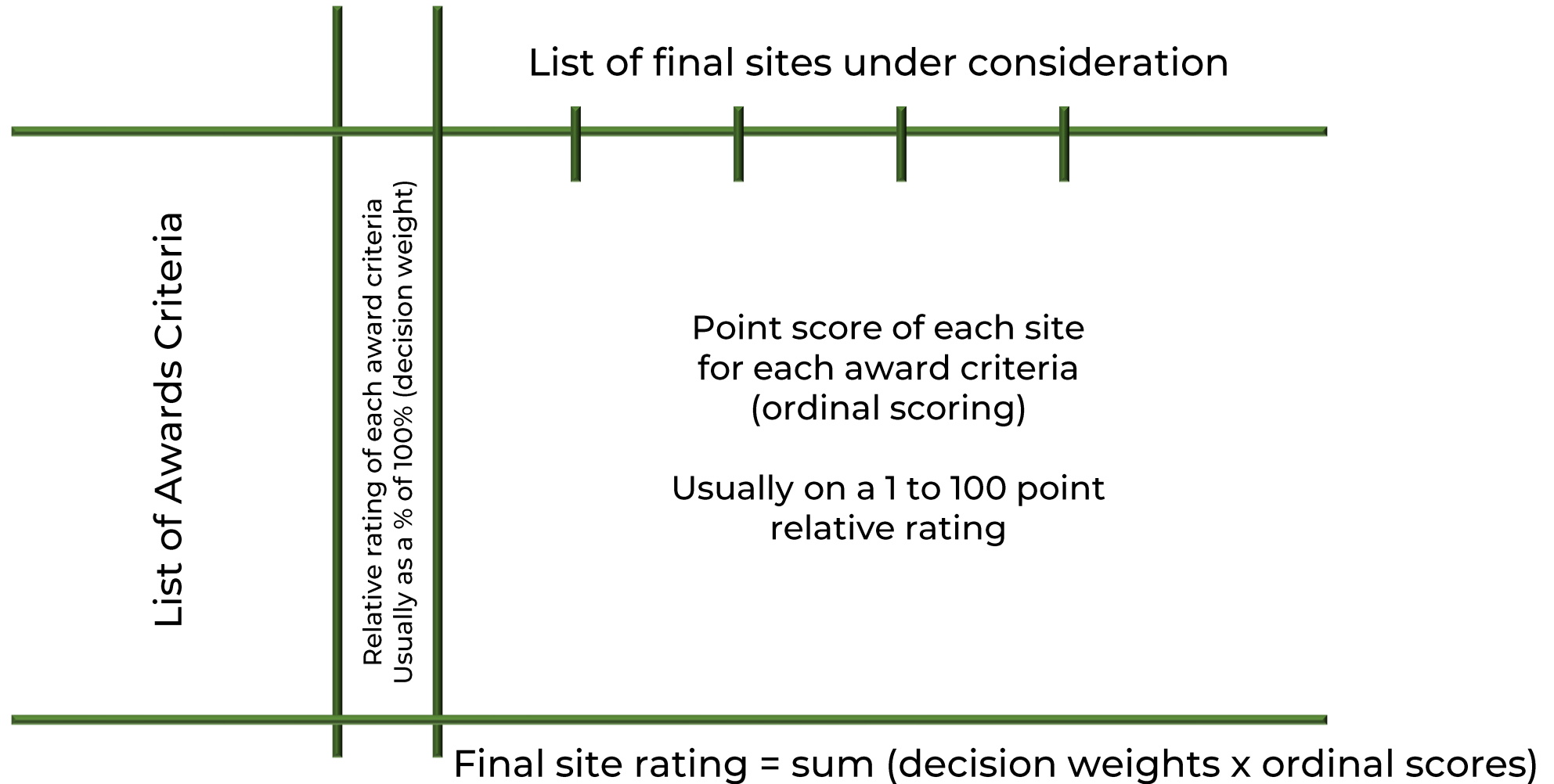


# Part 6: Building the Site Selection Matrix

**Jeff Troan**  
**Vista Site Selection**



# Greek Logic Matrix

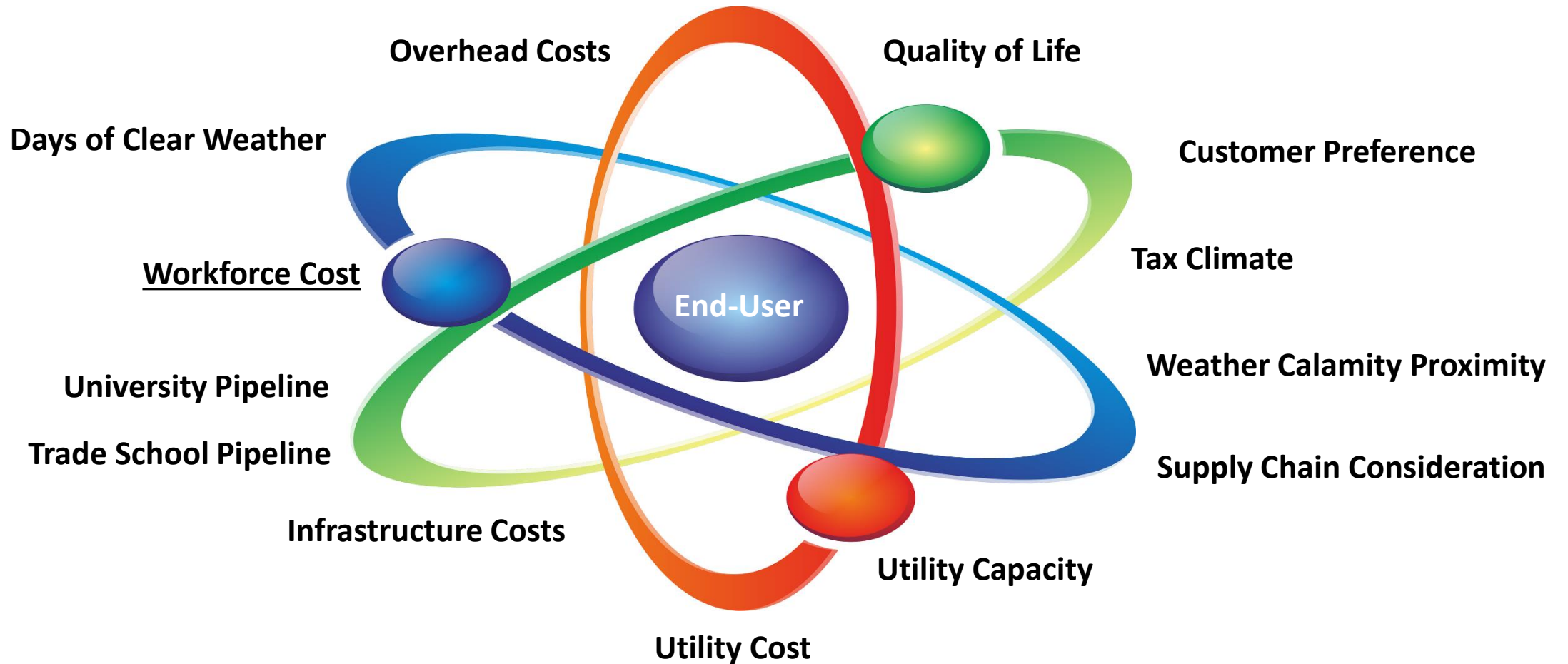


# Considering the Qualifiers

Award Criteria	Weight	Site 1, Site 2, etc
<p><b>Digital Qualifiers</b> – These are qualifiers that either work, or it is impossible to utilize the site.</p> <p>Examples: Density Altitude Rule; Hurricane Avoidance; Temperature/Humidity for Production; Workforce Availability</p>	NA	Go/NoGo
<p><b>Analog Qualifiers</b> - These are qualifiers to which a <u>decision weight</u> and <u>ordinal score</u> can be applied.</p> <p>Examples: Days of clear weather; land cost; facility cost; infrastructure incentives; labor demographics; direct cost of labor; workforce development incentives; wage incentives; real property tax; sales and use tax; state income tax; vat tax; gross receipts tax; federal income tax; tax incentives.</p>	1% to 100%	1 to 100 Points
<p><b>Qualifiers and weights are specific to each project</b></p>		

# The Qualifiers are Up the End-User

## Workforce Availability



# Key to a Good Matrix

- ▶ Comprehensive data collection and reduction
- ▶ Aggressive early business incentives work
- ▶ Extensive analysis of Greek logic matrix factors
- ▶ Participative Kaizen blitzes with a consensus decision
- ▶ Matrix breaks down a very complex decision into a series of manageable small component decisions
- ▶ Matrix enables the Kaizen process by externalizing the site selection logic
- ▶ Capture manager can easily explain the logic of the site selection

**Detailed application of a site selection Kaizen process is covered later in the course**



# Part 7: Incorporating the Impact of Business Incentives into the Matrix

**Janie Hanna**  
**Vista Site Selection**



# Adding Business Incentives to the Matrix

Consolidation Pharmaceuticals Bid	Factor Weighting	Houston TX	San Jose CA	Huntsville AL	Cincinnati OH/KY	Kansas City MO/KS
Site Type		PTW Site	Heritage	Heritage	Greenfield	Greenfield
Digital Qualifiers (GO or NOGO)						
Labor Availability	not applicable	GO - 1	GO - 1	GO - 1	GO - 1	GO - 1
Analog Qualifiers (1-100)						
Labor Cost	30%	80	10	65	93	95
etc.	10%	???	???	???	???	???
etc.	8%	???	???	???	???	???
etc.	12%	???	???	???	???	???
Subtotal Score Before Incentives	100%	???	???	???	???	???
Business Incentives Score Adjustments						
<u>California / San Jose</u>						
The State of California and City of San Jose offered a special legislative incentive rebating 80% of employee withholding tax to the company. Estimated value is \$200M against project labor cost deficiency.			7.8			

- The variance to PTW is \$539M.
- The point spread to PTW is 70 points.
- The Incentive offsets \$200M/\$539M.
- The factor has a 30% decision rating.
- $200/539 \times 70 \text{ points} \times 30\% = 7.8 \text{ points}$

7.8





# Part 8: Developing the Final Site Selection Recommendation

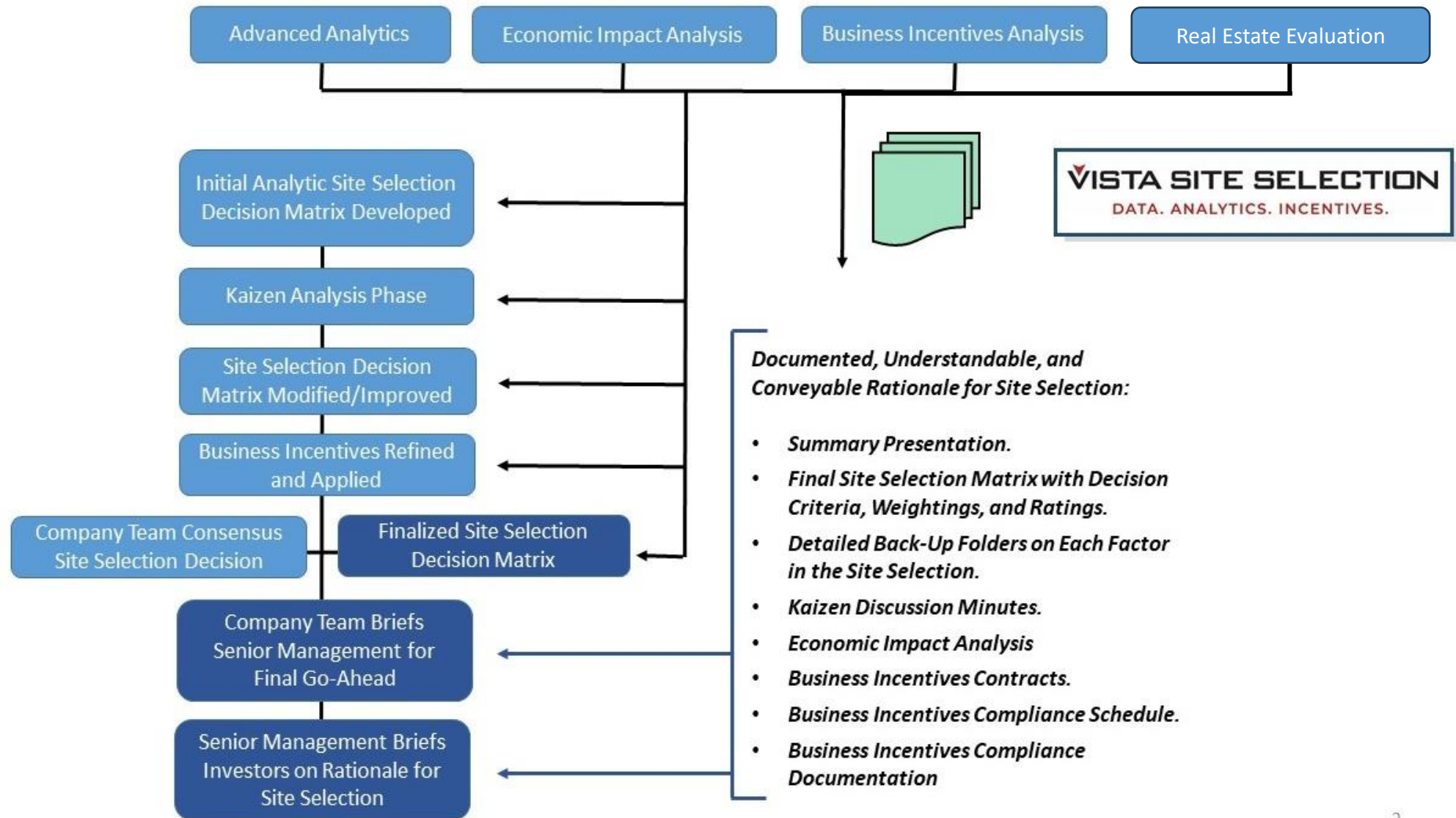
**Jeff Troan**  
**Vista Site Selection**

# 改善



- ▶ Project team includes all affected parties
- ▶ Decisions are collaborative (sign-up sheet)
- ▶ Team lead functions as a facilitator of discussion and tie breaker (consultant provides logistics support)
- ▶ Process under review is dissected by the team to identify waste, inconsistency and imbalance
- ▶ Small changes are made incrementally
- ▶ Cumulative impact of small changes is an optimized process
- ▶ Kaizen blitz is a series of scheduled team meetings where the project team incrementally improves the process under review

# Adapting the Kaizen for Site Selection





# Part 9: Briefing Upper Management on the Recommendation

**Matt Samler and Chris Magill**  
**Vista Site Selection**

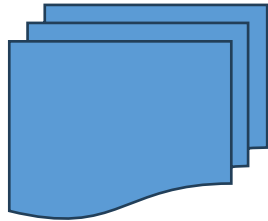


# Analytic Site Selection on the Rise

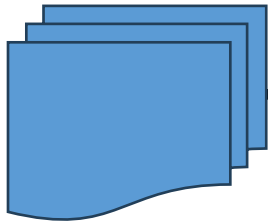
- ▶ Corner office management, oversight boards and investor have come to realize that site selection drives the big three cost factors: labor, benefits, and physical plant.
- ▶ Oversight boards and investors want to know, “WHY THERE?”
- ▶ Bad proposal siting = Wasted overhead and resources
- ▶ Bad Siting breeds a slow painful bleed to extinction
- ▶ TQM = Analytic justification required
- ▶ **Site Selection Teams need to be able to explain a complex site decision**

# Armed to Explain the Site Selection

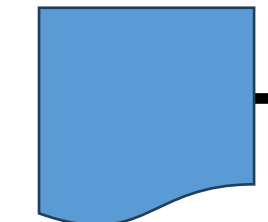
Data Binders  
for each  
qualifier



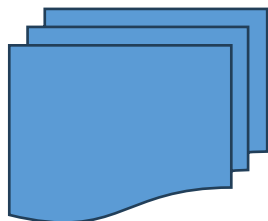
Kaizen  
Record Book  
of Team  
Meetings



Kaizen Team  
Consensus  
Sign-off Sheet.



Incentives  
Agreements.



Site Selection Matrix						
Factor	Weight	San Jose California	Huntsville Alabama	Houston Texas	Cincinnati Ohio	Kansas City Missouri
Type of Site		Heritage	Heritage	Competitor	New Site	New Site
<b>Digital Qualifiers (Go or NoGo)</b>						
Labor Availability	NA	Go	Go	Go	Go	Go
<b>Analog Qualifiers</b>						
Labor Cost	15.0%	2	7	7	9	9
Labor Technical Acumen	15.0%	9	8	8	8	8
Ability to Relocate Workers to the Region	5.0%	2	8	7	7	6
University and Trade School Pipeline	10.0%	9	5	5.5	9	7
Overhead Competitiveness	10.0%	4	6	9	9	9
Cost to Facilitate Program (Retrofit or New)	15.0%	4	7	3	3	3
Overhead Absorption	5.0%	10	10	2	2	2
Customer Preference (Implied)	10.0%	4	10	8	5	5
Supply Chain (Software Job)	0%	10	10	10	10	10
Utilities Cost	5%	5	10	6	6	6
State and Local Taxes	10%	1	3	8	5	8
Weighted Average Site Score	100%	4.9	7.1	6.5	6.6	6.6
<b>Business Incentives Score Adjustments</b>						
California / San Jose						
Alabama / Huntsville						
Texas / Houston						
Cincinnati / Ohio-Kentucky						
Kansas City / Kansas - Missouri						
Weighted Average Site Score Adjusted for Business Incentives		4.9	7.1	6.5	6.6	6.6



- Summary chart shows how each factor in the site selection was scored and weighted
- Slide deck contains a detailed chart for each factor in the selection.
- Kaizen incremental improvement ensures all options are fully explored.
- Kaizen consensus sign-off ensures no rouge functions.



# Part 10: Questions from the audience

All  
Vista Site Selection





Matthew T. Samler

Senior  
Managing  
Director



Christopher J. Magill

Managing  
Director



Evan L. Stair

Managing  
Director –  
Analytics



Geoffrey J. Troan

Managing  
Director



Janie S. Hanna

Economic  
Development  
Manager



# Questions?



**Further Question or  
Concerns?**

**Not to worry, the Vista  
Group will be around  
here all week!**