

IDEAS



IDEAS_o8

On December 2nd, 2013, forty senior leaders from the AEC, Manufacturing and Entertainment industries met at Autodesk University to explore the evolution of their organizations' business models.

Using a practice called Visual Strategy, the participants mapped global drivers, explored the deep structure of their industry, identified emerging workflow and new business models and determined bold steps for new and thriving organizations.

The exercises provided participants with opportunities to work together closely to think through big issues, identify common patterns between industries, and prototype new organizations with new business models that will thrive in a turbulent future.

IDEAS_o8 PARTICIPANTS

Jon	Anunson AIA	URS CORPORATION [GP]	Director, Design Technology
Paul	Audsley	NBBJ	Principal-Dir Design Technology
Joe	Barr	HANSEN YUNCKEN	CEO
Rob	Bredow	SONY PICTURES IMAGEWORKS	CTO
Hugh	Dubberly	DUBBERLY DESIGN	Founder
Jan	Fisher	WORLEY PARSONS	National Project Delivery Systems
Bane	Gaiser	HNTB	VP - Architecture Practice Leader
Paul	Gibson	EXP GLOBAL INC [GP]	Exec VP, Building
Nils	Gustavsson	POREX	SVP/GM OEM Technology
Elizabeth	Harper	GHD SERVICES PTY LTD [GP]	Chief Information Officer (CIO)
Mark	Hatch	TECHSHOP	CEO
Andy	Hendrickson	WALT DISNEY ANIMATION	CTO
John	Jacobs	JE DUNN	Senior Vice President
Brian David	Johnson	INTEL CORPORATION	Futurist
Karim	Khalifa	MARRIOTT	SVP
Sue	Klawans	GILBANE	VP of Operational Excellence
Jochen	Köhler	PERI	Head of Engineering and Design
Dr. Jürgen	Kussi	BAYER TECHNOLOGY SERVICES	Vice President / Head Plant Layout
Matthew	Kyte	ARCADIS NV	CIO EMEA
Patrik	Lindvall	NCC	VDC Integration Director
Chris	Luebke	ARUP	Director Global Foresight
Mike	McCullough	WALT DISNEY IMAGINEERING	VP Environmental Design Engineering

Paul	Murphy	GHD SERVICES PTY LTD [GP]	Global Technical Leader-Property
William	Nelson	CAMP DRESSER & MCKEE INC	SVP Project Technology Development
Andreas	Palmlund	PÖYRY OYJ [GP]	SVP Global Engineering Centers
Ross	Porter	CB&I	Director Global Engineering Systems
Jon	Pittman	AUTODESK	VP, Strategy
Brian	Rogers	M+W	Head of Group Engineering Efficiency
JP	Saini	TRC COMPANIES	CIO
Nathan	Shedroff	CCA	Program Chair, MBA Design
Alvise	Simondetti	ARUP	Global Leader, Virtual Design
Hendrik-Jan	Smaal	HEIJMANS	Chief Information Officer
Greg	Smith	EVANS CONTROLS	CEO
Friedrich	Spitzer	VOITH IT SOLUTIONS	General Manager
Kevin	Sticht	CANNON DESIGN	COO
Maurice	Tayeh	MCDERMOTT INC.	VP & Chief Information Officer
Dick	Thomas	SHP ARCHITECTS	VP
Luca	Tiepolo	DANIELI OFFICINE	Chief Information Officer
Lincoln	Wallen	DREAMWORKS	CTO
Markus	Weidner	PENNONI	CIO
Jon	Williams	BECA GROUP	Director
Kenneth	Wiseman	CANNON DESIGN	President, Professional Services
Tom	Wujec	AUTODESK INC	Fellow

NEW BUSINESS MODELS

The participants developed seven new business models in their industries.

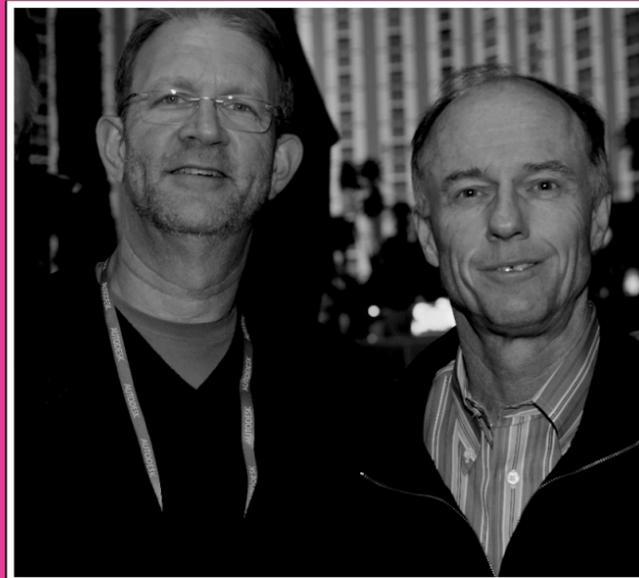
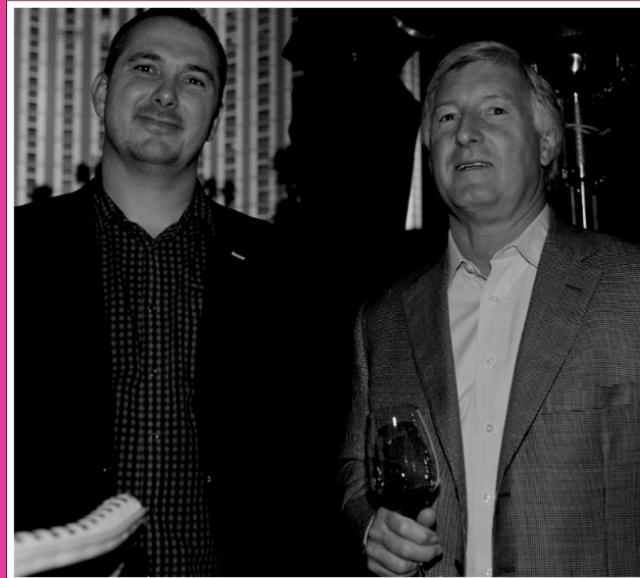
Common themes emerged:

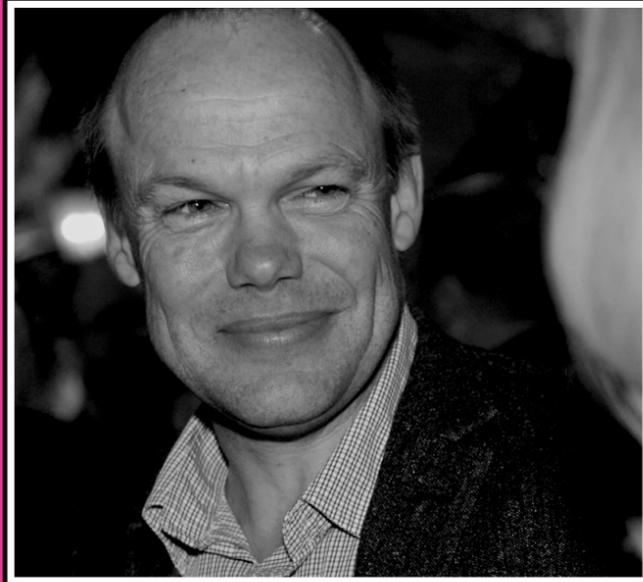
- To thrive in the evolving economies, businesses must deliver more complete service offerings, rather than point solutions.
- Success depends on creating new mechanisms and incentives for collaboration with clients and partners delivering services.
- Businesses must incorporate more data driven decision-making approaches.
- There are many more opportunities to include successive prototyping at all levels of business.

IDEAS 08 RECEPTION









WELCOME & INTRODUCTION



WELCOME AND INTRODUCTION

Jon Pittman, VP Autodesk Strategy welcomed the participants to IDEAS.

Tom Wujec, Autodesk Fellow, acted as the facilitator, leading the group through the exercises.



INTRODUCTION

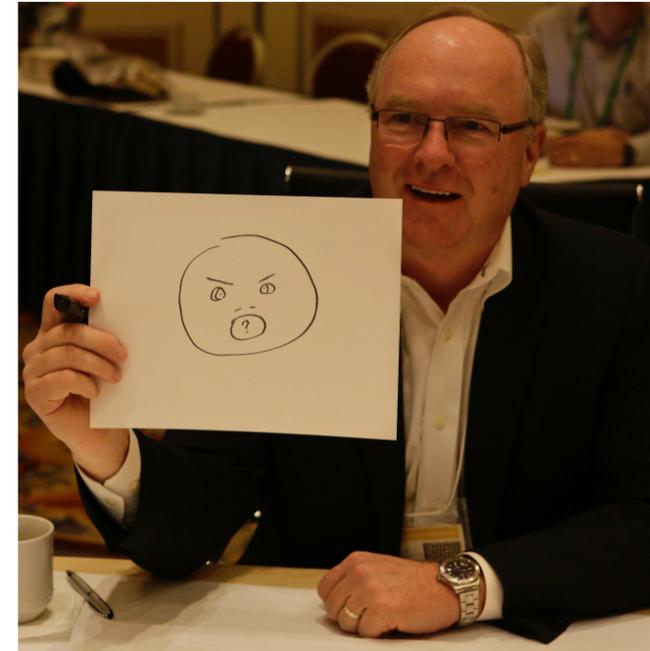
The goal of the workshop was to collectively explore how to reinvent the business models of design. Using the Visual Strategy approach, participants engaged in a series of systems model exercises to map out the key business model elements.



INTRODUCTION

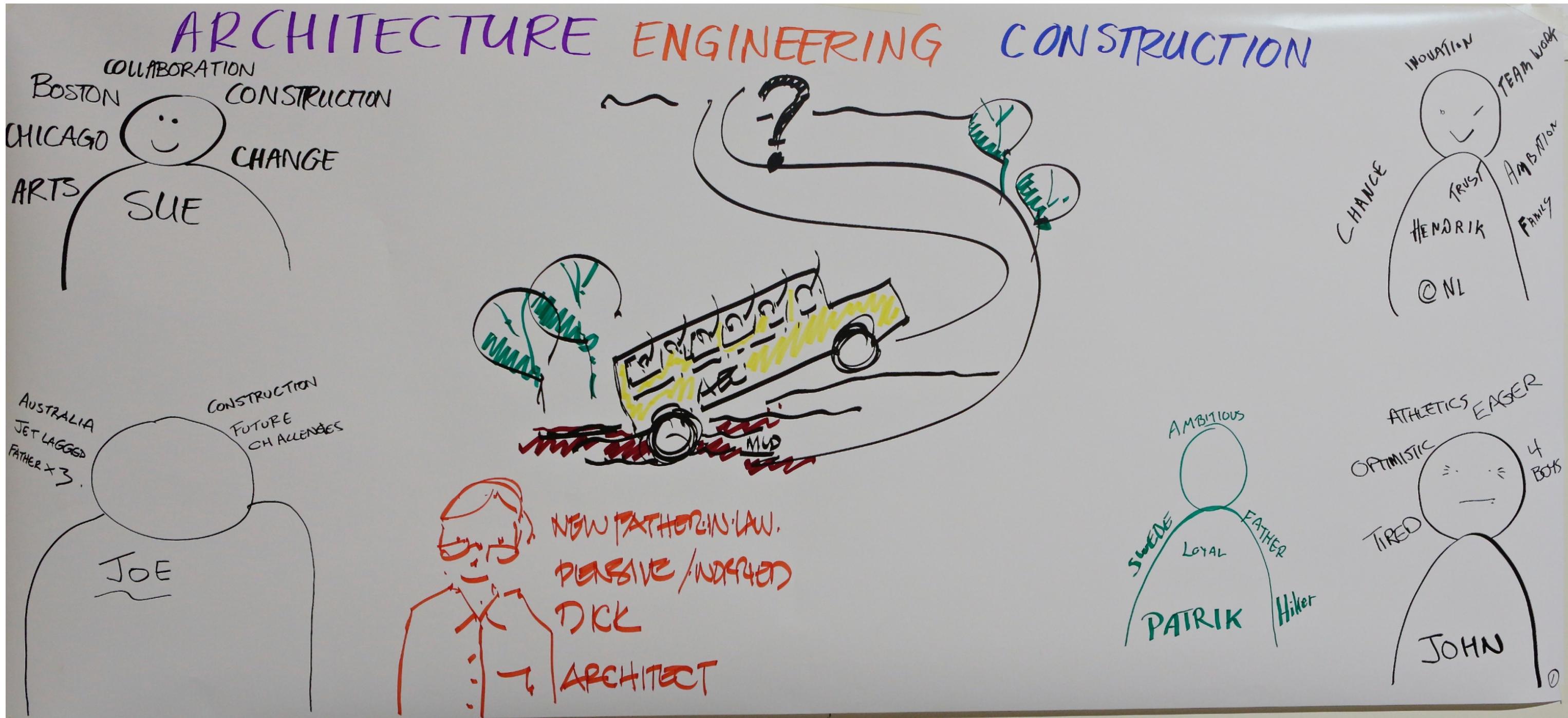
The workshop began with a warm up exercise which involved drawing pictures of how they felt about their industry today.

Working in industry teams, these drawings became incorporated into team posters that charted collective attitudes and introduced the participants.



INTRODUCTION

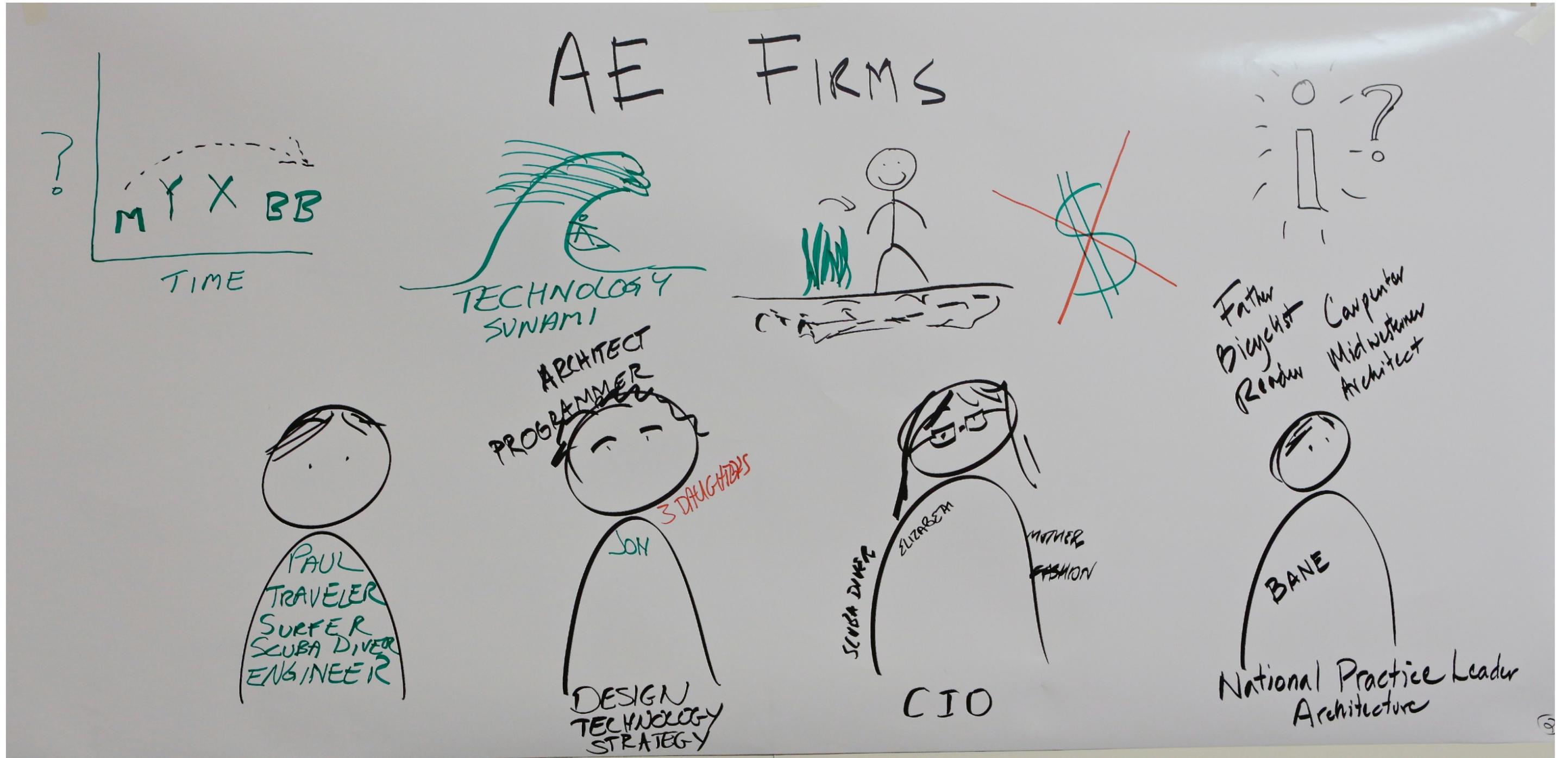
TEAM ONE:
Architecture, Engineering, Construction



INTRODUCTION

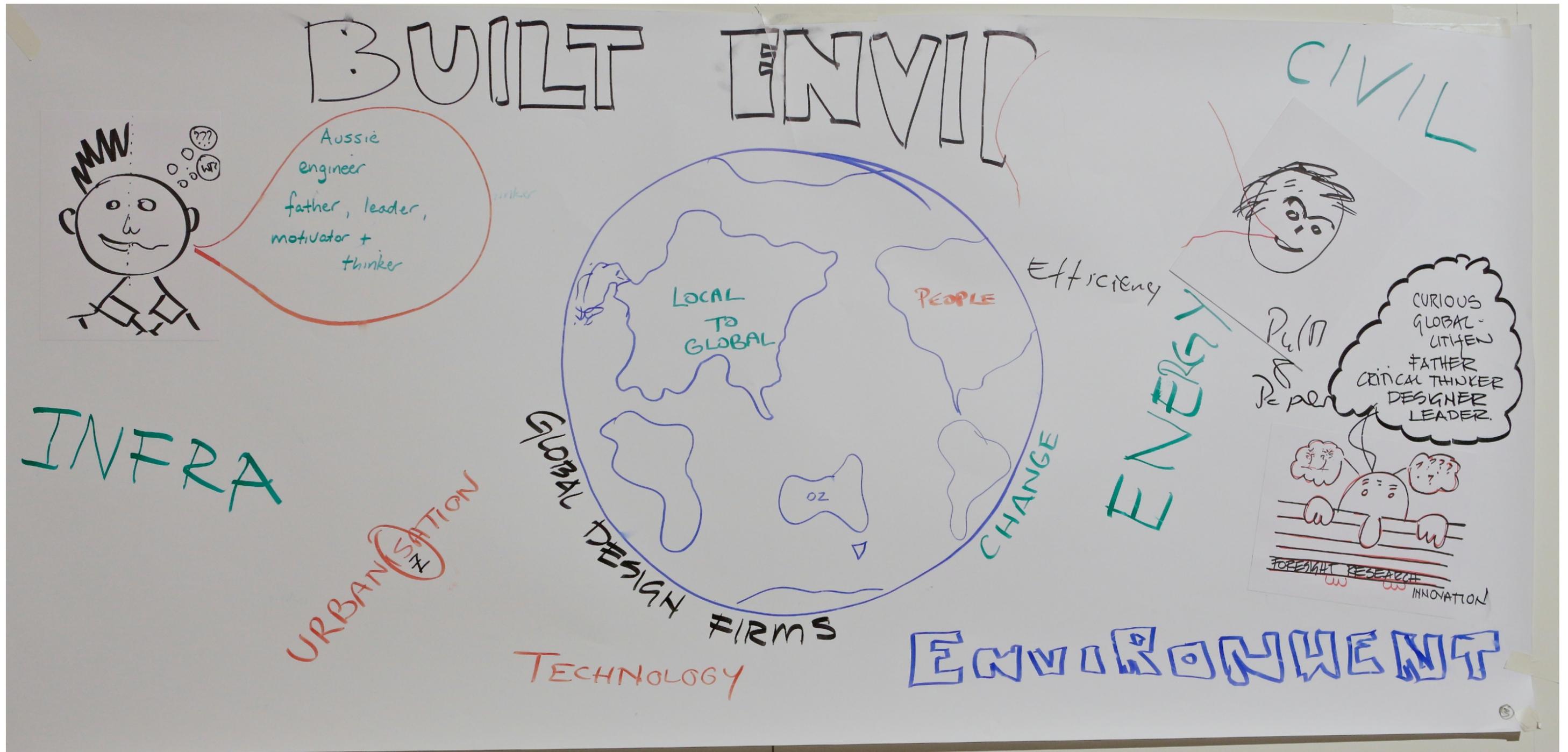
TEAM TWO:

Architecture, Engineering, Firms



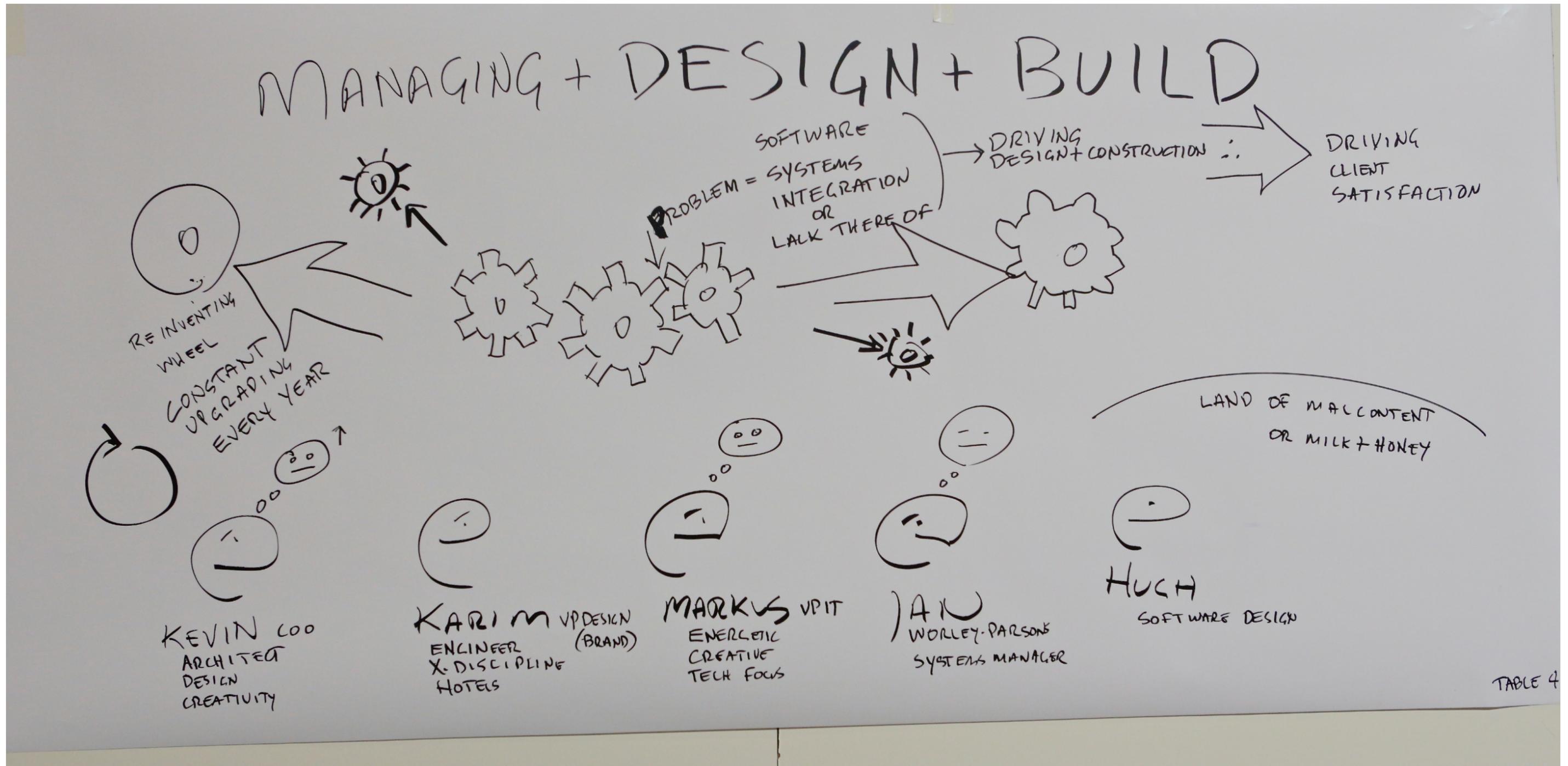
INTRODUCTION

TEAM THREE:
Built Environment



INTRODUCTION

TEAM FOUR:
Managing Design & Build



INTRODUCTION

TEAM FIVE:
Design & Manufacturing

DESIGN & MFG.

GLOBAL COMPETITION → COST REDUCTION → DESIGN INNOVATION → PRODUCT INNOVATION

quality
time money
past future

IT-Development

Luca Tiepolo
IT engineer
Italian
technology for business

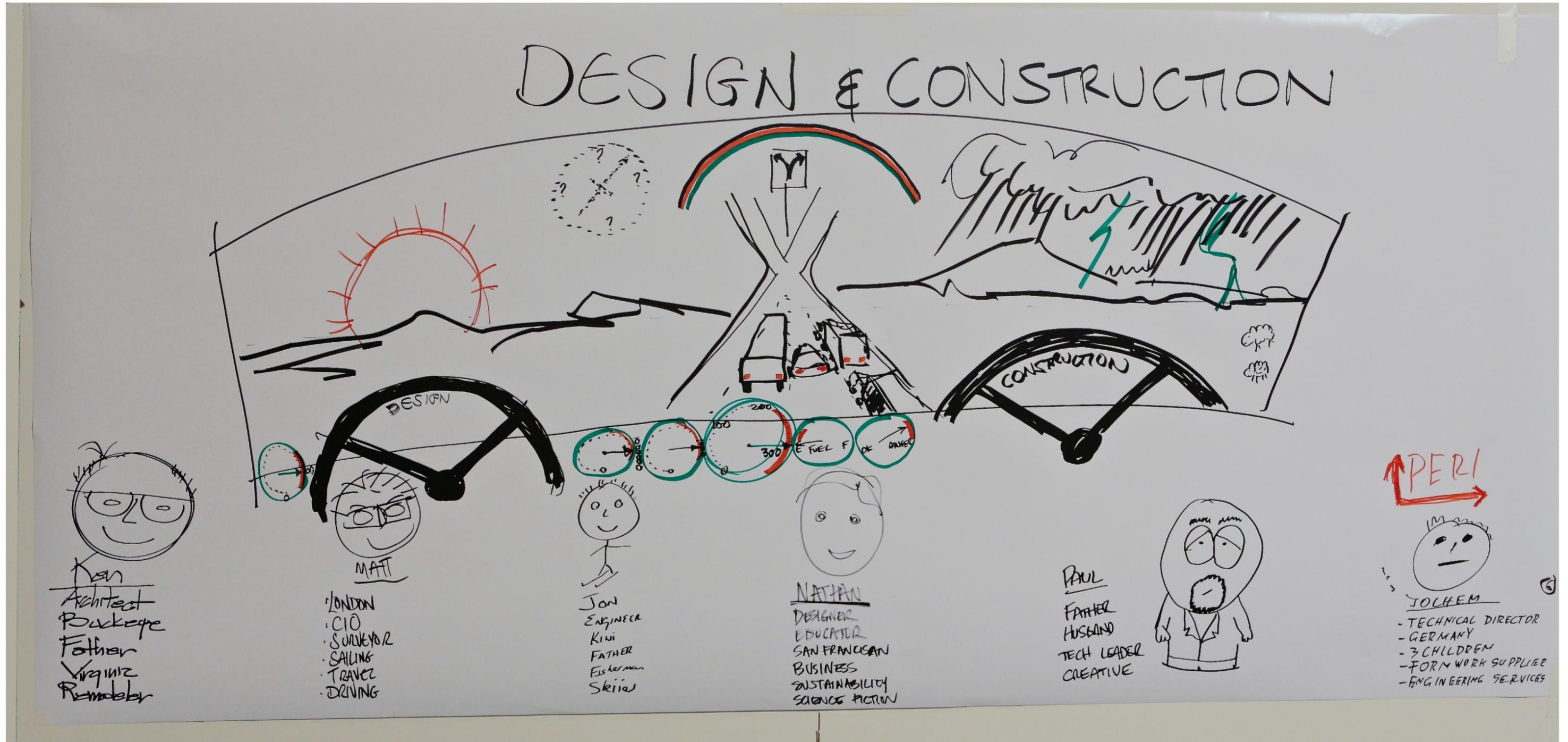
Friedrich Spitzer
GLOBAL TACTICIAN
AUSTRIAN
TECH. ENG.
NEW SURVIVING BUS IN IT
BELIEVER
FATHER

Greg Smith
INT'L BUSINESS MAN
CEO
CANADIAN
FATHER OF 2
MARRIED 37 YRS

Jürgen Kussi
GLB
OF BAYER
Viermot Engine
Lexus
European

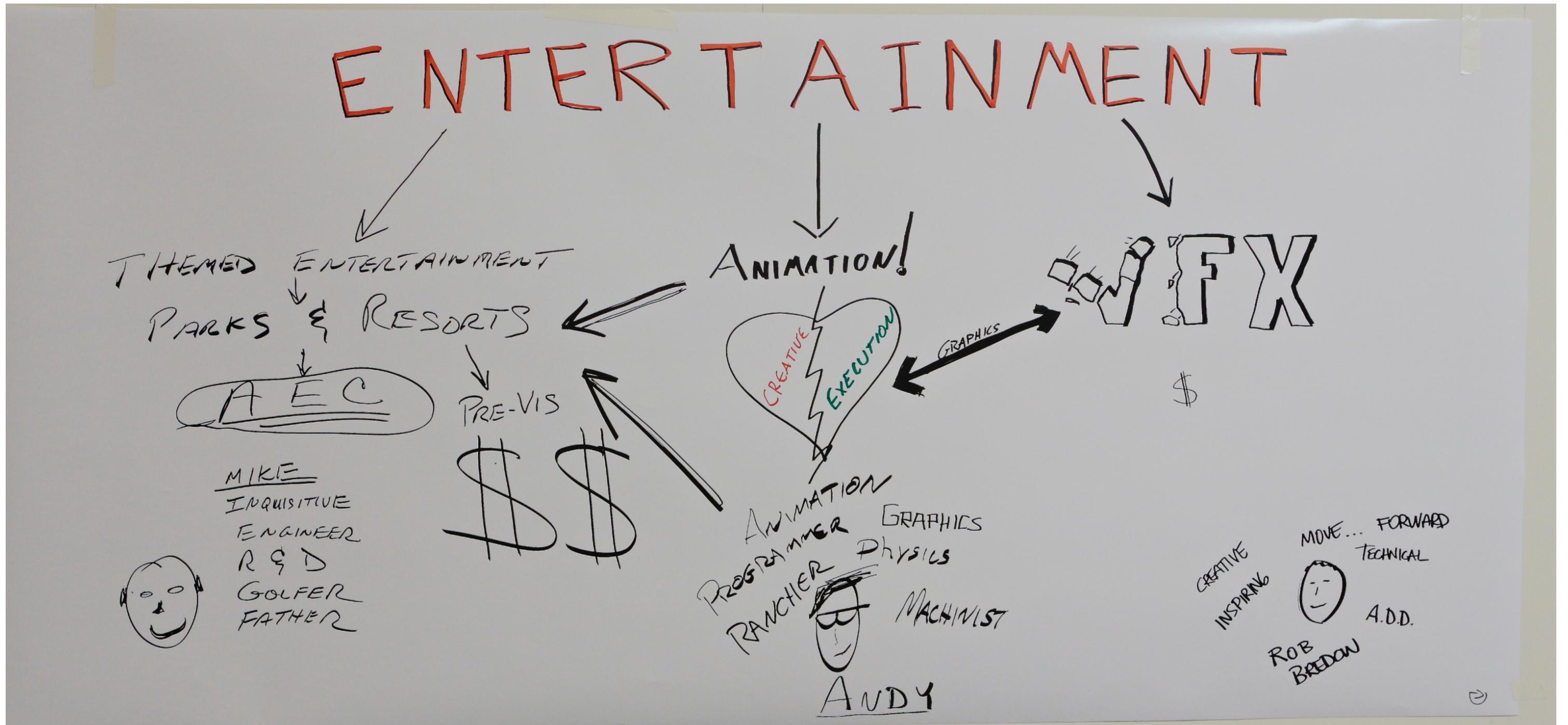
INTRODUCTION

TEAM SIX:
Design & Construction

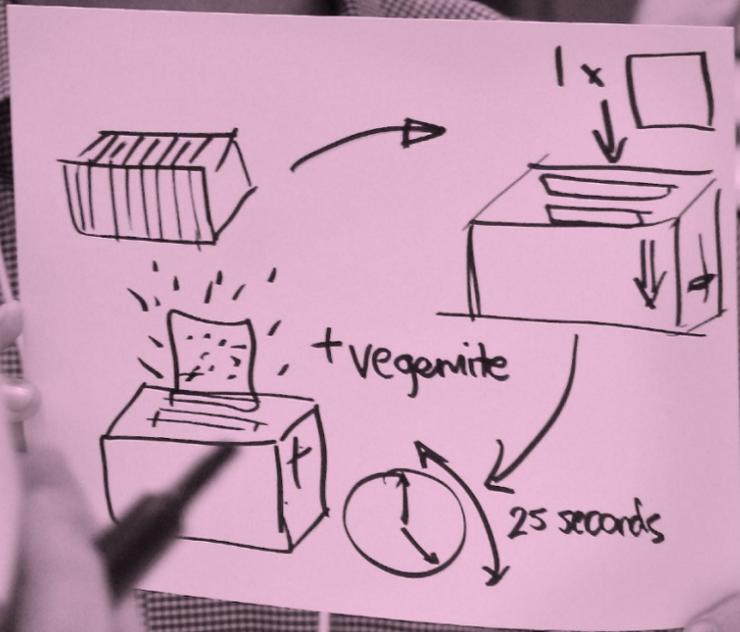


INTRODUCTION

TEAM SEVEN:
Entertainment



SYSTEMS THINKING



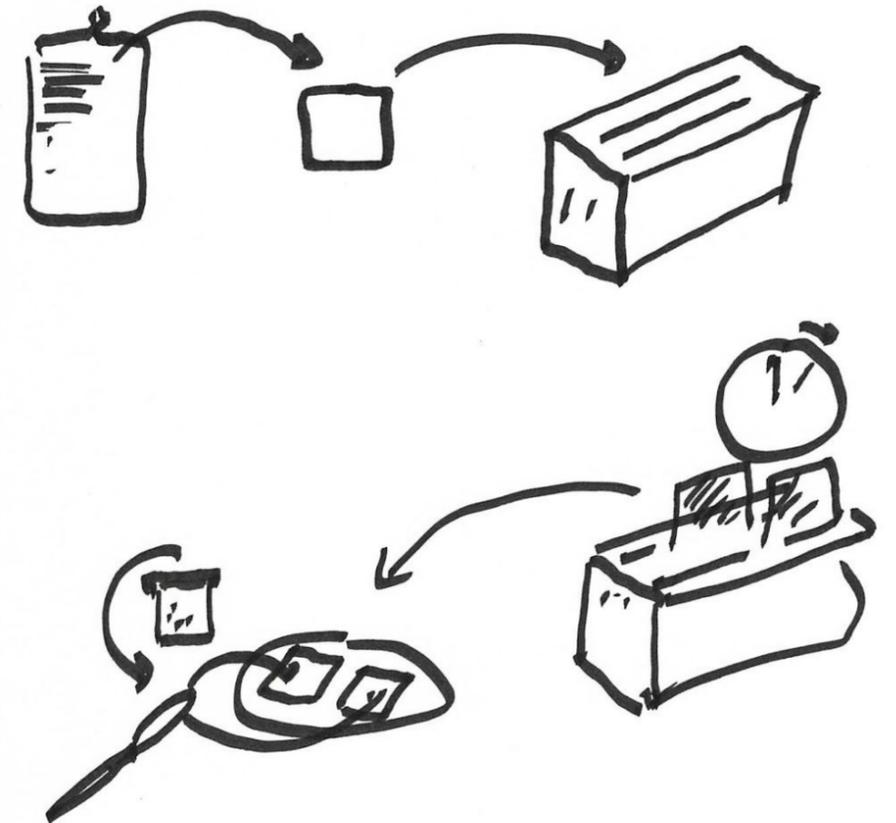
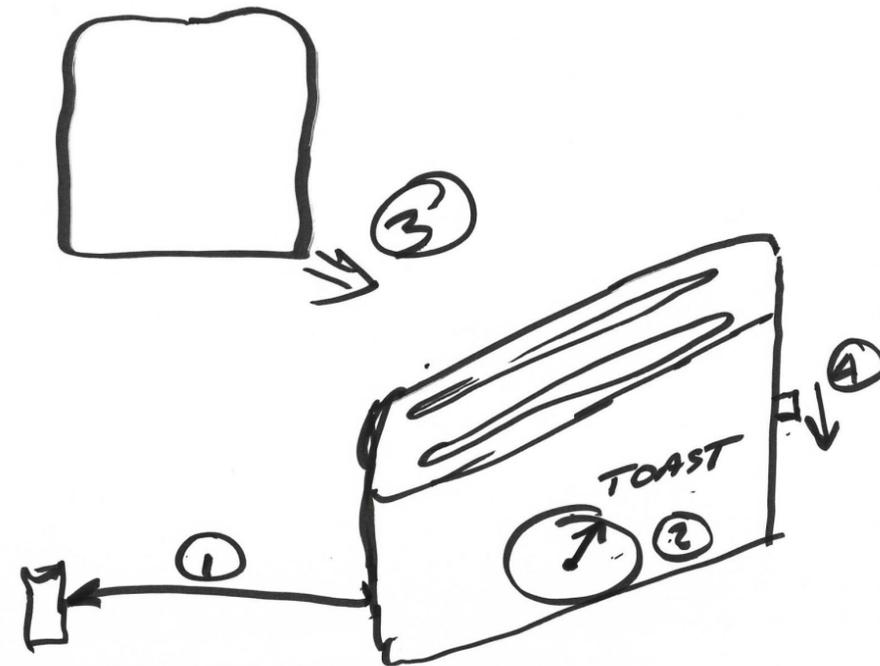
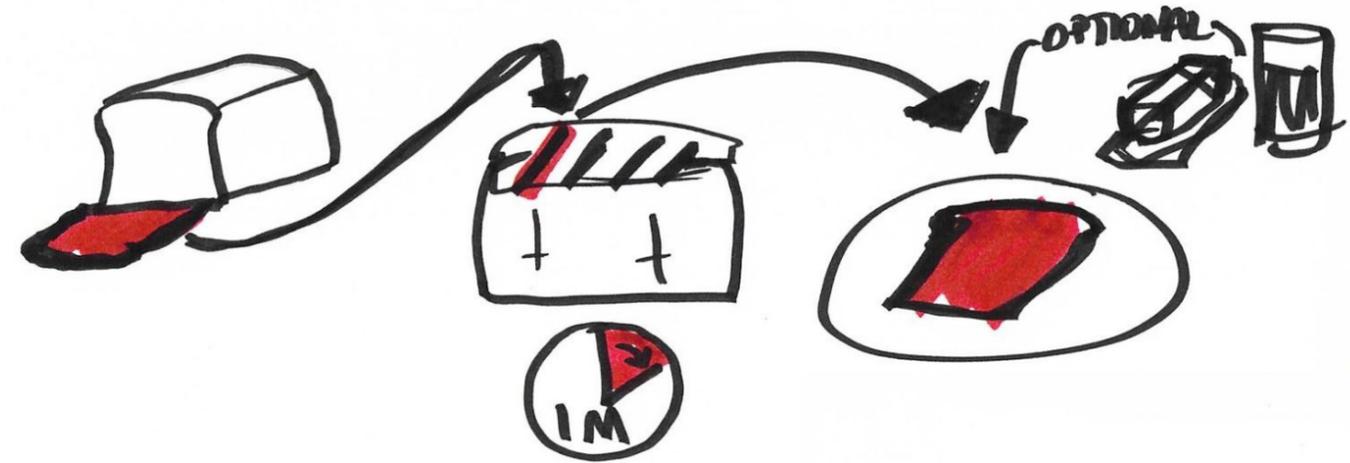
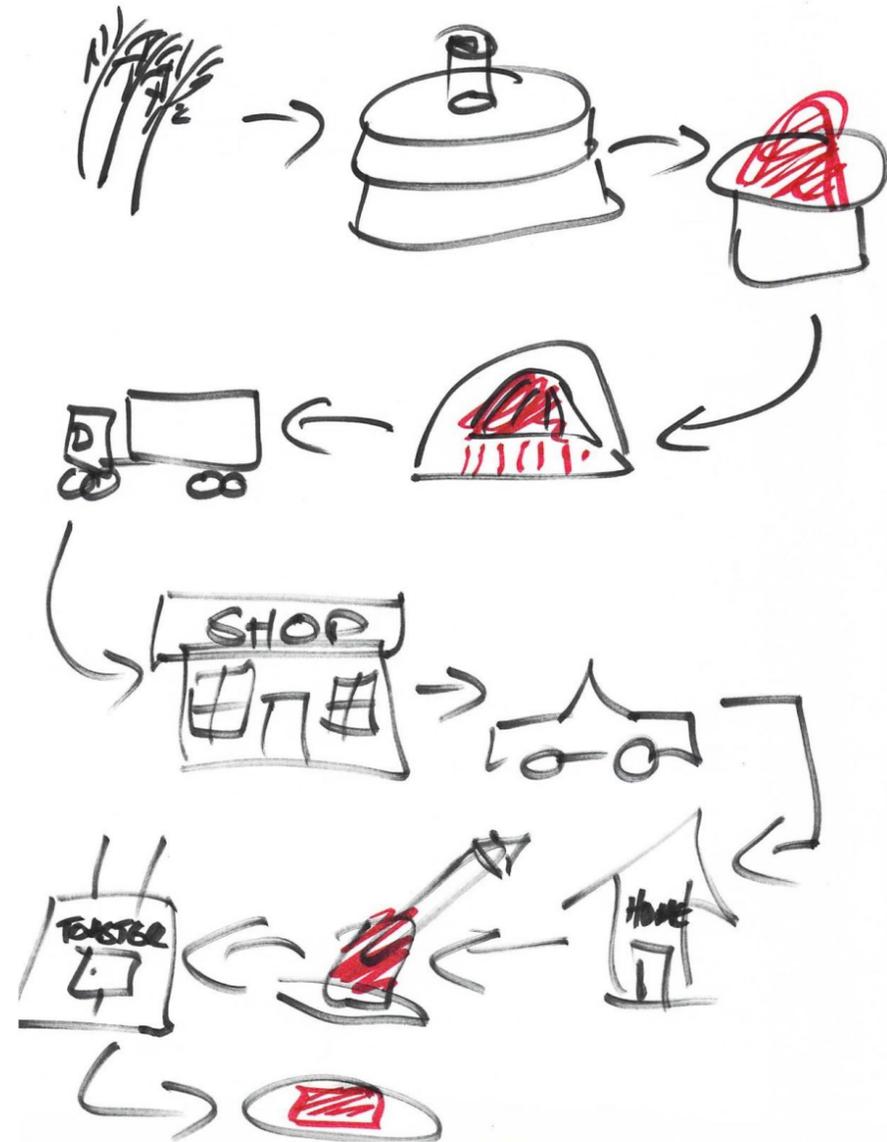
SYSTEMS THINKING

Participants continued with an exercise called 'Draw How to Make Toast' which provided a shared framework on systems thinking.

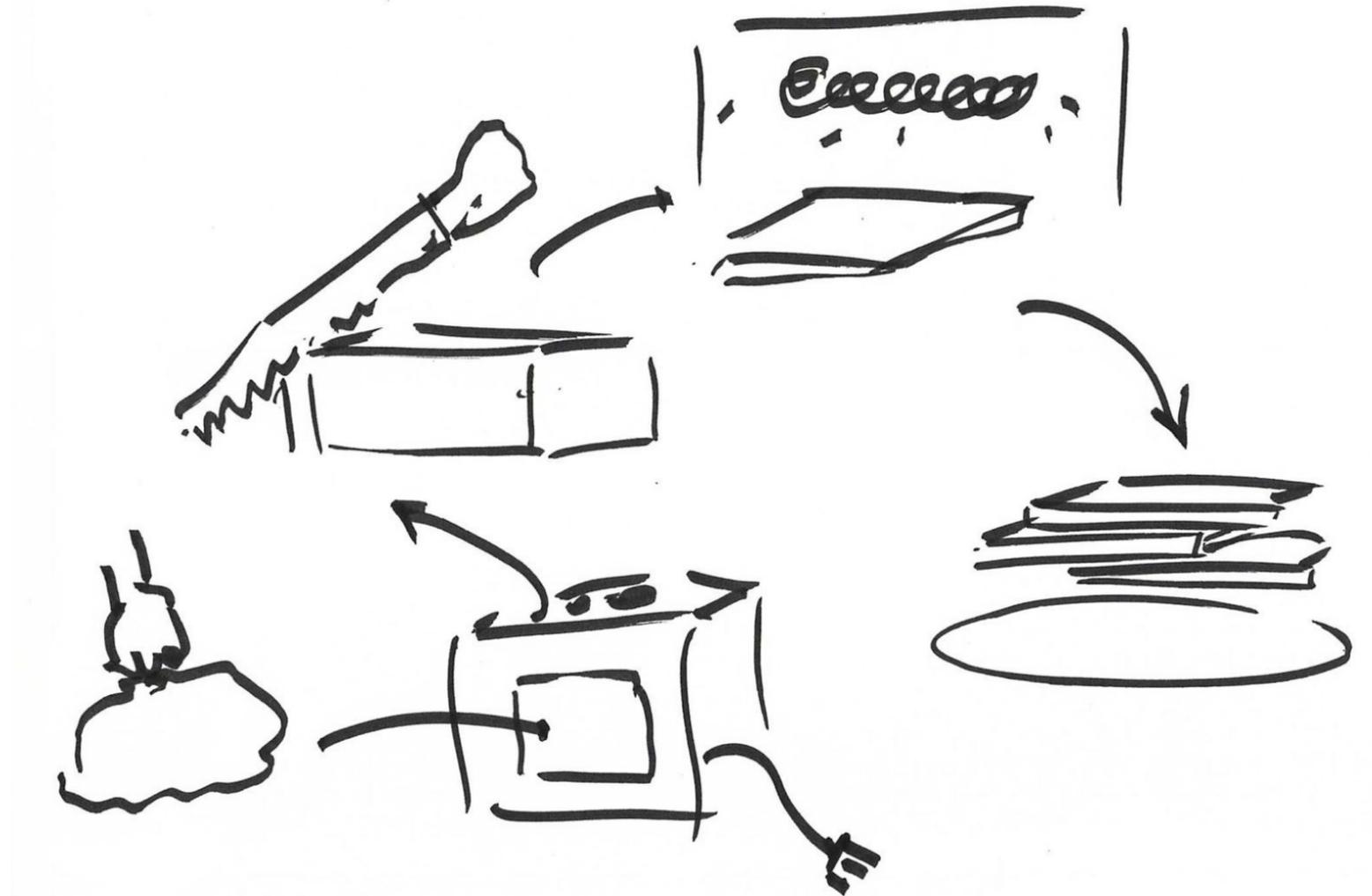
The essential nature of diagramming is to identify parts of the a system and label them as nodes and identify the connections between the nodes as links. The combination of links and nodes produces a visual model of a system.



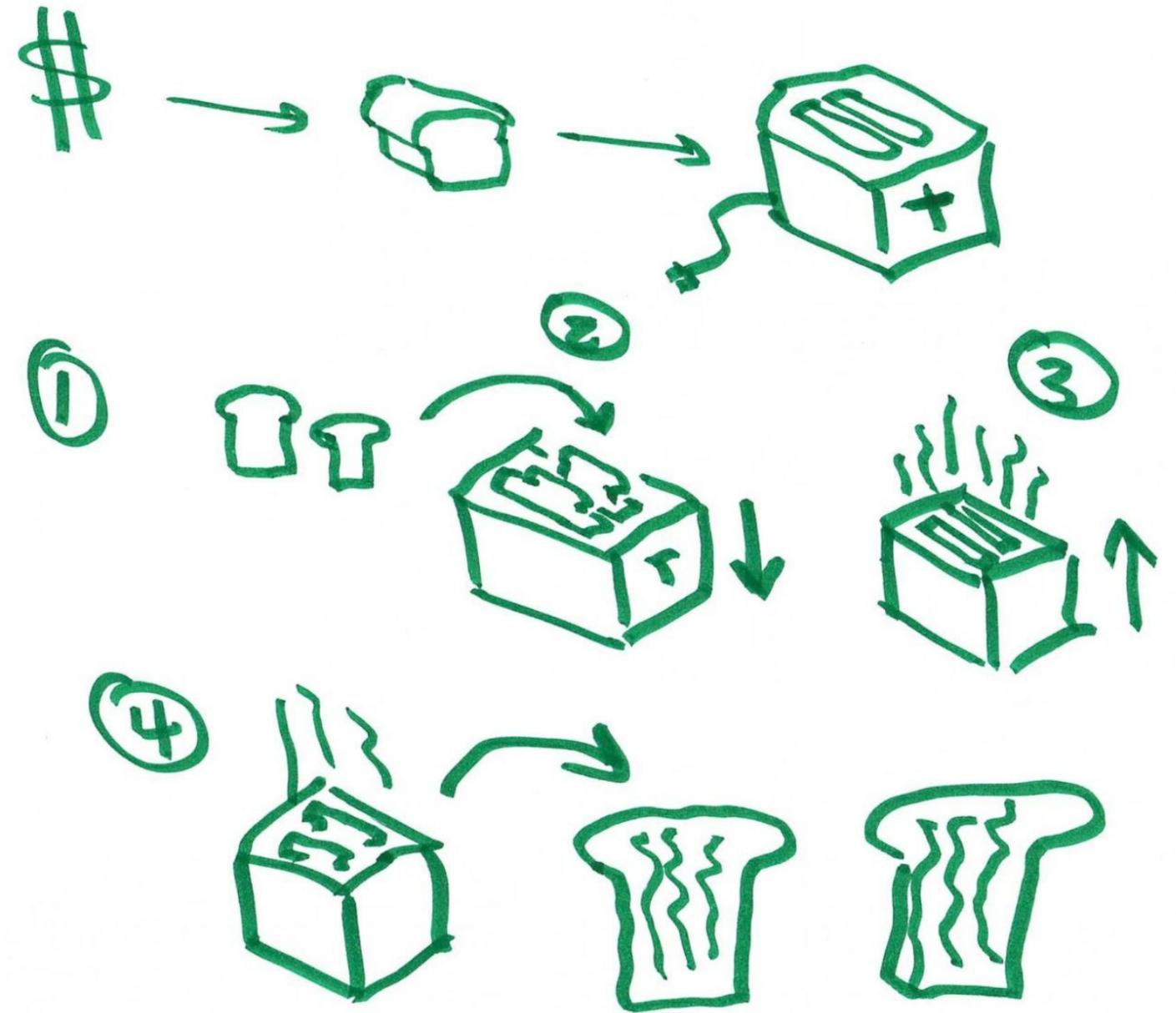
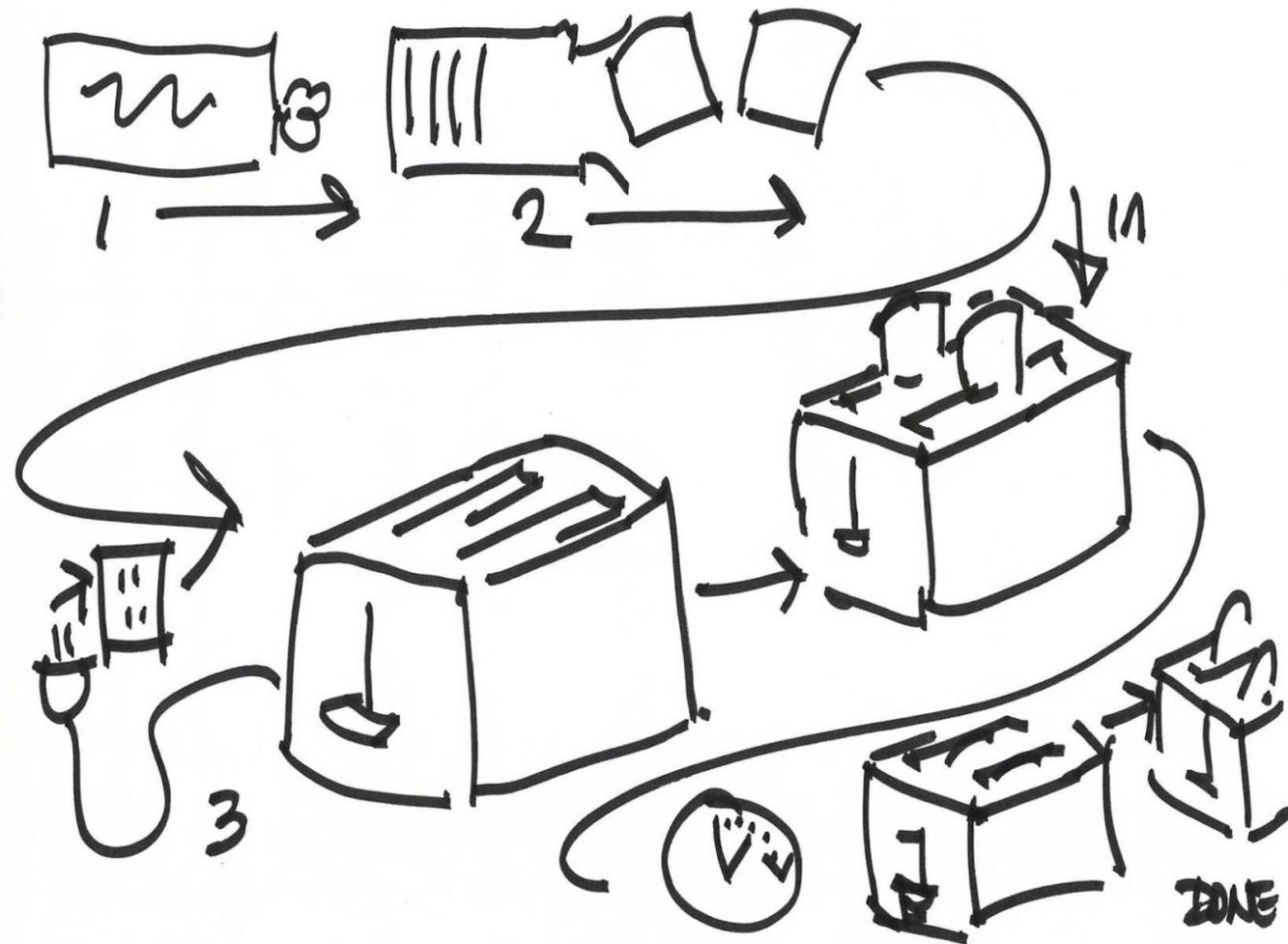
HOW TO MAKE TOAST DRAWINGS



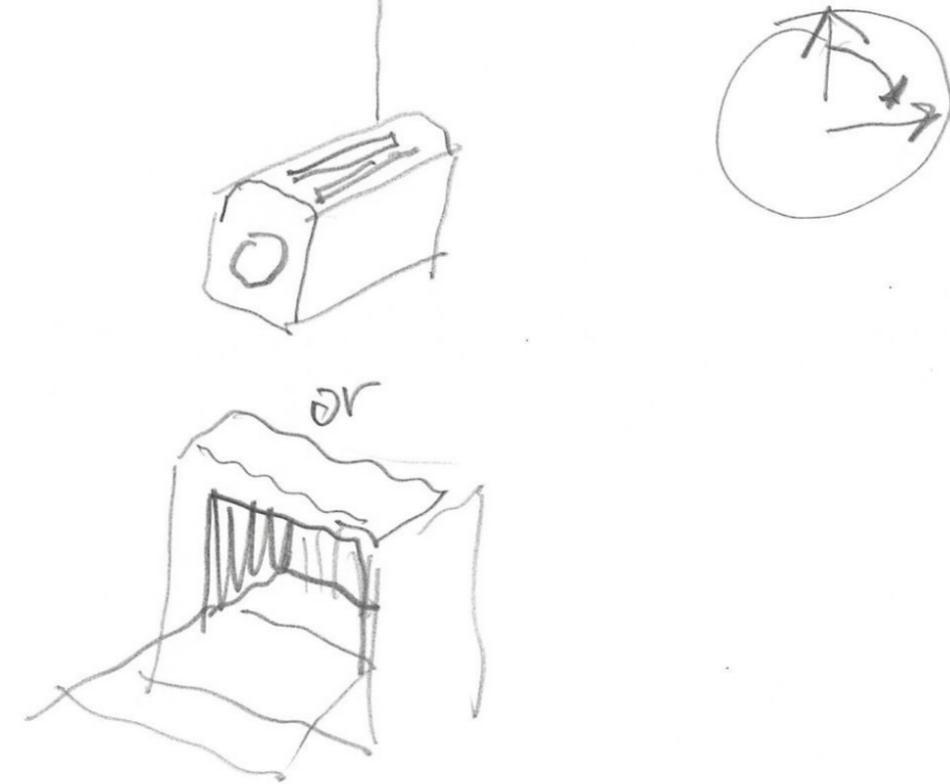
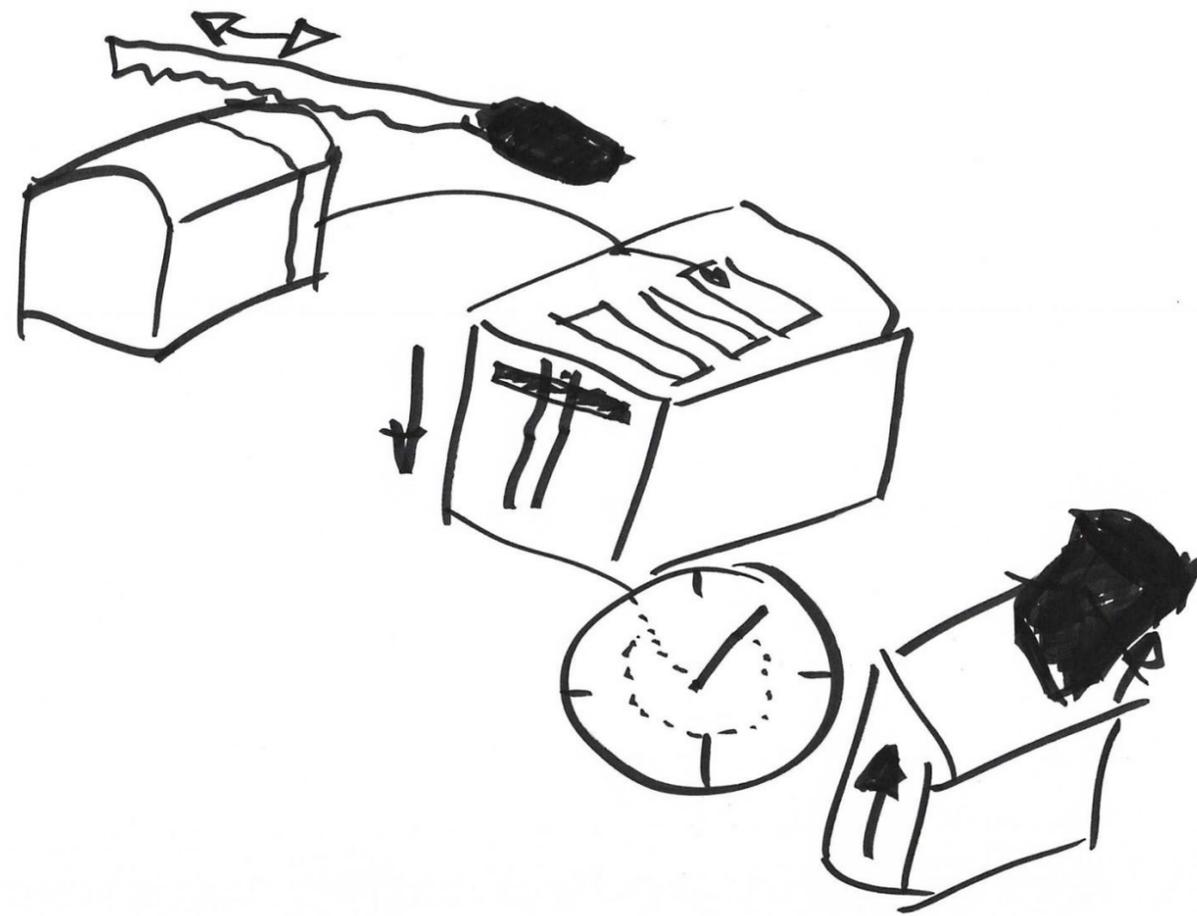
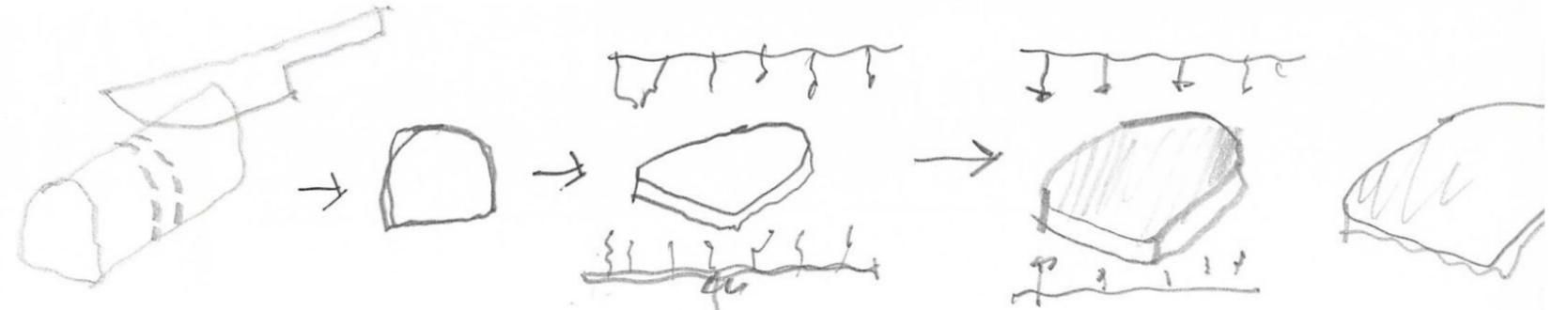
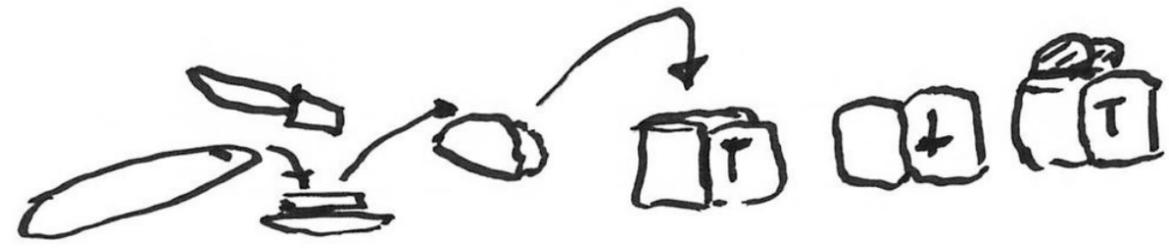
HOW TO MAKE TOAST DRAWINGS



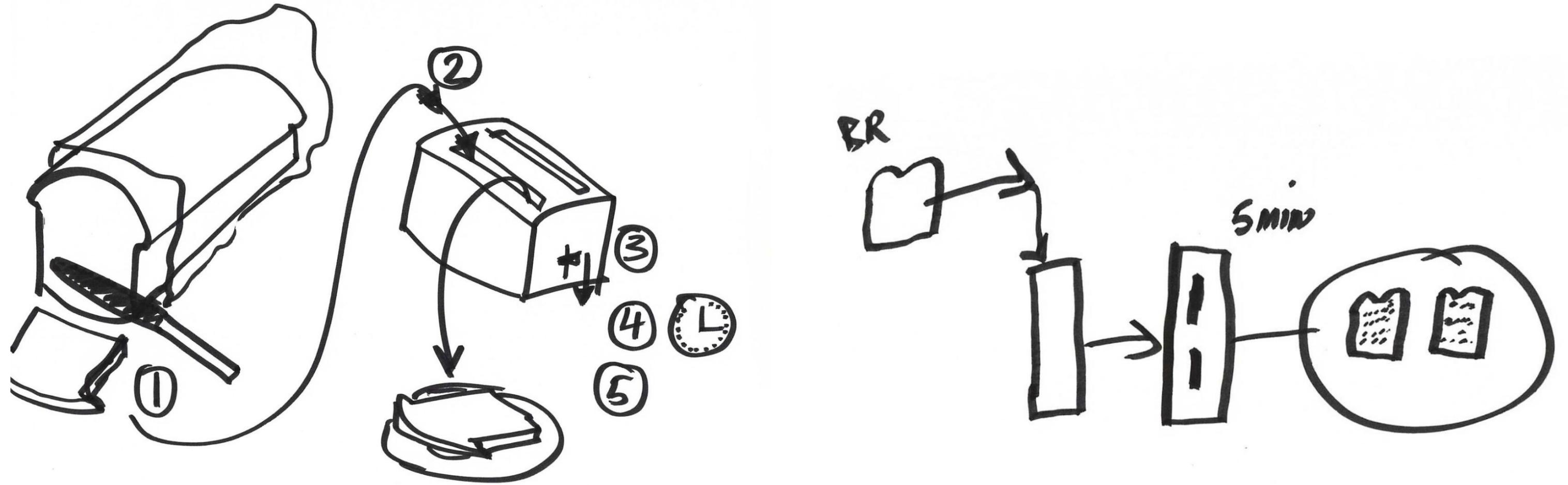
HOW TO MAKE TOAST DRAWINGS



HOW TO MAKE TOAST DRAWINGS



HOW TO MAKE TOAST DRAWINGS



BUSINESS MODEL SYSTEMS THINKING

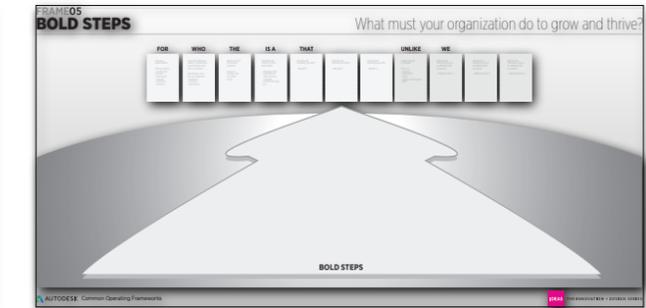
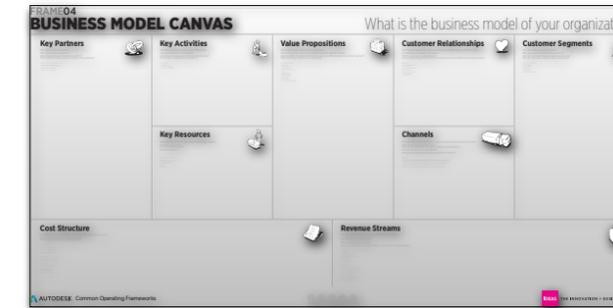
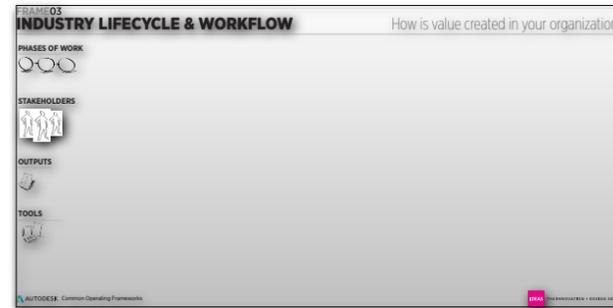
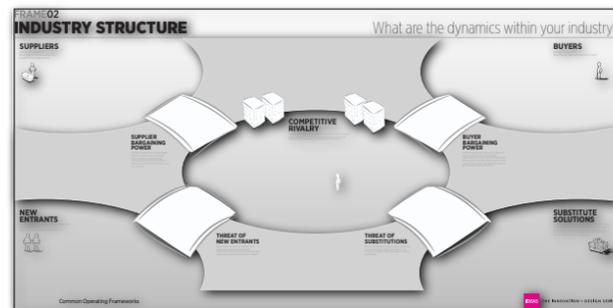
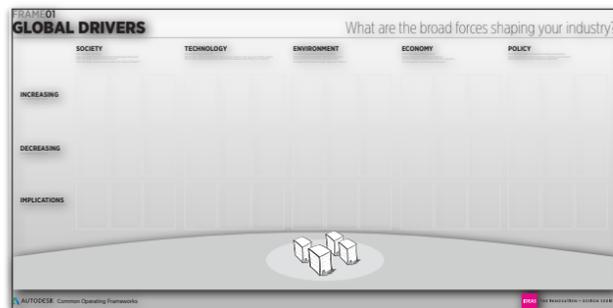
The remaining bulk of the workshop focused on developing comprehensive systems models at five focal settings.

- 1) Global Drivers
- 2) Industry Structure
- 3) Workflow and Life Cycle
- 4) Business Model
- 5) Bold Steps for Success

Each systems model provided participants with a way to identify key nodes, analyze their relationships and synthesize their meaning.

FIVE KEY QUESTIONS

The workshop identified five central topics for discussion, each of which had its own systems diagram.



WHAT BROAD FORCES ARE SHAPING YOUR INDUSTRY?

WHAT IS CHANGING IN YOUR INDUSTRY?

HOW ARE ORGANIZATIONS CREATING VALUE?

HOW ARE BUSINESS MODELS CHANGING?

WHAT MUST ORGANIZATIONS DO TO THRIVE?

FRAME 01 GLOBAL DRIVERS

FRAME 01 GLOBAL DRIVERS

SOCIETY

• Younger people developing relationships through technology vs. human interaction

• Aging population in the world

• We've been transformed to a society of entitlement
- coffee orders
- retail service expectations

• Society is becoming more pluralistic

• IMMEDIATE ACCESS TO INFORMATION
• ALWAYS CONNECTED
• INCREASING COMMITMENT TO FAMILY/WORK BALANCE

• Social Sustainability is driven by Globalization

TECHNOLOGY

• DATA CENTRIC
• PERSUASIVE COMPUTING
• DIGITAL COLLABORATION
• DATA DRIVEN DECISION MAKING

ENVIRONMENT

ECONOMY

DECREASING

IMPLICATIONS

FRAME 01

GLOBAL DRIVERS

The first focal setting identified the major relevant forces in five categories:

- Society
- Technology
- Economy
- Environment
- Politics

Within each category, participants determined what has increasing, decreasing, and what reached a milestone.

With these factors identified, each group developed a thesis of the central impact of the changing world on their industry.

FRAME01 GLOBAL DRIVERS

What are the broad forces shaping your industry?

SOCIETY

*How is society changing?
How are people changing? Physically? Emotionally? Physically?
What are people doing more of? Less of?
What trends do you see in cultural behaviors, values and beliefs?*

TECHNOLOGY

*How is technology evolving?
Which tools - digital and physical - are having an impact on the way your industry operates?
Which technologies have the greatest potential to advance and disrupt your industry?*

ECONOMY

*What is the state of the economy?
Locally? Regionally? Nationally? Globally?
How does the economic climate affect the ecosystem of your suppliers, customers and employees?*

POLICY

*Which policies, laws and regulations shape your industry?
What new regulations will augment or constrain your business?
How much is your business shaped by legislation?*

INCREASING

Which factors are growing?

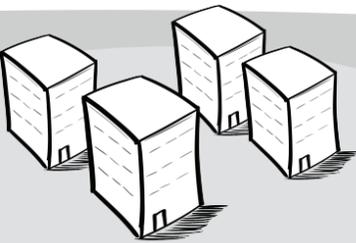
DECREASING

Which factors are shrinking?

IMPLICATIONS

What do these trends mean for your industry?

WHAT BROAD FORCES ARE SHAPING YOUR INDUSTRY?



SOCIETY

How is society changing?

How are people changing? Physically? Emotionally? Physically?

What are people doing more of? Less of?

What trends do you see in cultural behaviors, values and beliefs?

Three empty dashed rectangular boxes are arranged horizontally across the bottom half of the page, intended for taking notes or providing answers to the questions above.

TECHNOLOGY

How is technology evolving?

Which tools - digital and physical - are having an impact on the way your industry works?

Which technologies have the greatest potential to advance and disrupt your industry?

--	--	--

ENVIRONMENT

*How is the physical environment changing?
Which environmental drivers affect your business?
From local living conditions to global changes,
how does environmental change shape your industry?*

--	--	--

ECONOMY

*What is the state of the economy?
Locally? Regionally? Nationally? Globally?
How does the economic climate affect the ecosystem
of your suppliers, customers and employees?*

--	--	--

POLICY

Which policies, laws and regulations shape your industry?

What new regulations will augment or constrain your business?

How much is your business shaped by legislation?

--	--	--

INCREASING

Which factors are growing?

--	--	--	--	--	--	--	--	--	--	--	--

DECREASING

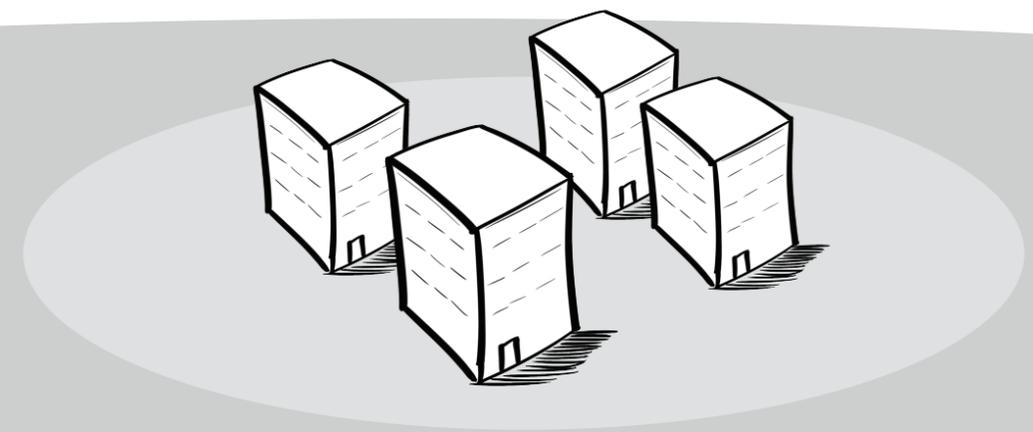
Which factors are shrinking?

--	--	--	--	--	--	--	--	--	--	--	--

IMPLICATIONS

What do these trends mean for your industry?

--	--	--	--	--	--	--	--	--	--	--	--



GLOBAL DRIVERS PRESENTATIONS

Each team delivered a short presentation describing their themes.



GLOBAL DRIVERS

TEAM ONE:

Increased demand for speed of cost reduction.

FRAME 01 | 1 AEC INDUSTRY

GLOBAL DRIVERS

What are the broad forces shaping your industry?

SOCIETY

How is society changing? What are people doing more of? Less of? What trends do you see in cultural behavior?

- Younger people developing relationships through technology vs. human interaction
- We've been transformed to a society of entitlement - coffee orders, retail service expectations
- Aging population in the industrial world
- Society is becoming more pluralistic!
- INCREASING COMMITMENT TO WORK/FAMILY BALANCE
- CHANGE MANAGEMENT BIGGEST CHALLENGE.

TECHNOLOGY

How is technology evolving? Which tools, data, and information are being used? How is it being used?

- Information is the new value proposition
- Information management is key to successful business value
- Technology evolving as underpinning of dialog/communication
- ALWAYS CONNECTED
- DIGITAL COLLABORATION NECESSITY
- implications: the business process has changed + will continue to change - need to embrace it

ENVIRONMENT

How is the physical environment changing? Which environmental drivers affect your business? From local living conditions to global changes? How does environmental change shape your industry?

- DESIRE TO MAKE A STATEMENT (PERSONAL & CORPORATE) ABOUT POSITION ON ENVIRONMENT
- Environmental preservation is still an option versus necessity
- CO2 ENERGY DELIVERING INSTANT CONSUMING
- increasing focus of building operational cost over - reduce energy consumption
- increased demand for speed & cost reduction requires new processes

ECONOMY

What is the state of the economy? Locally? Regionally? Nationally? Globally? How does the economic climate affect the engagement of your business, customers and employees?

- RISK BEING PUSHED TO CONTRACTORS DISTORTION B/W RISK & REWARD
- MARGIN PRESSURE - harder to make A RETURN.
- Buyer's Market - increased commoditization - price as driver - piling on rights + contract terms
- implications: must find new ways to: - differentiate & provide value - disrupt the pricing model

POLICY

Which policies, laws and regulations shape your industry? What new regulations will impact or constrain your business? How much is your business shaped by legislation?

- policy making has become stratified - non-productive "collaboration" is losing!
- DATA OWNERSHIP & SECURITY GLOBALLY IS HEAVILY REGULATED & VERY COMPLEX
- ACA IMPACT ON HEALTHCARE PROVIDERS: HOW THEY DELIVER SERVICES
- GLOBAL U.S. LOCAL POLICY
- policy making has to be more collaborative to keep pace with rate of change.

DATA IS SINGLE SOURCE OF TRUTH

IK. Common Operating Frameworks

IDEAS THE INNOVATION + DESIGN SERIES

GLOBAL DRIVERS

TEAM TWO:

Cool the Potato: Intelligent Risk Management

FRAME 01 GLOBAL DRIVERS

What are the broad forces shaping your industry?

TECHNOLOGY (Hyde, Jechel)

ENVIRONMENT

ECONOMY

POLICY

Driving Policy → RISK

INCREASING

- Connectivity through Social Media
- Digital Human Interaction: ONLINE GAMING, TEXTING
- SPEED OF EVERYTHING
- Different generational approaches in the workplace
- Construction is resembling Manufacturing
- INCREASING DATA COMPLEXITY & AVAILABILITY DURING DESIGN
- SPEED DEMANDS INSTANT GRATIFICATION
- INCREASED SUSTAINABILITY
- INCREASING PRESSURE TO OPERATE SUSTAINABLY
- COMMUNICATION OF TODAY'S REALITY
- INCREASING PRESSURE TO ELIMINATE WASTE/ ERRORS
- DEMAND FOR ENERGY

DECREASING

- DECREASE IN PHYSICAL CONNECTION
- DECREASE IN HUMAN INTERACTION: VERBAL, PERSONAL, SOCIAL
- INTERNET OF "THINGS" EVERYTHING IS CONNECTED
- TIME TO "SMELL THE ROSES" (imple walk in the park that headset)
- MORE DATA COINCIDES w/ desire for more speed
- DATA ORGANIZATION (TRANSLATION) IN THE LIFE CYCLE
- DECREASING FEES
- CAPITAL FOR INFRASTRUCTURE R&D Budgets
- AUSTRALIA GOVT SPENDING MINING
- INCREASING MARKET FOR ALTERNATIVE OWNERS
- DIGITAL PROTOTYPING & DELIVERY I.E. ASIA
- LOW COST DELIVERY I.E. ASIA
- LONG TERM Relationships w/ owner/client
- LEGAL SHED RISK

IMPLICATIONS

- Teams are separated physically Collaboration must be worked in conjunction in this.
- WE ARE GETTING READY FOR THE MATRIX
- POOR COMMUNITY
- Skills GAP (compatibility)
- Merging of design & construction spheres
- Constant STIMULATION INCREASED ability to process MASSIVE AMOUNTS OF INFORMATION
- Builders DRIVING DESIGN
- FLATTE OR GOALS
- NEED FOR COLLABORATION
- NEED COMMON COMPATIBILITY
- Specialists are increasing
- DATA HAS VALUE beyond construction i.e. Asset Mgmt
- VALUE IN DATA
- INTEGRATION OF SUSTAINABLE ENERGY?
- RESPONSIBLE DESIGN
- DESIGN TO PERFORMANCE GOALS need to reject performance
- FEES
- UNREAL EXPECTATIONS Decision makers don't have to live with their decision
- Ownership will transfer to those taking risks

COMMUNICATION

WE need to Cool the potato

RISK

LEGAL SHED RISK

INNOVATION + DESIGN SERIES

GLOBAL DRIVERS

TEAM THREE:

Stop Denying the Global Forces.

FRAME01 GLOBAL DRIVERS

GLOBAL DESIGN & ENGINEERING FIRMS.

What are the broad forces shaping you

SOCIETY
How is society changing? (Physically? Emotionally? Psychically?)
How are people changing? (Physically? Emotionally? Psychically?)
What are people doing more of? Less of?
What trends do you see in cultural behaviors, values and beliefs?

- RISE OF INDO-ASIAN MIDDLE CLASS
- ↑ Demand in Africa + Asia for Western middle class lifestyle + opportunities
- ↑↑ generational turnover results in loss of years of knowledge
- Generation out West vs East
- Global Communities
- Cost of labour in global economies is highly variable

TECHNOLOGY
How is technology changing?
Which tools - digital and physical - are having an impact on the way your industry works?
Which technologies have the greatest potential to advance and disrupt your industry?

- UBIQUITOUS ACCESS TO PROCESSING
- BIM BAM BOOM
- PL USE PLATFORM LIFE CYCLE DECREASING

ENVIRONMENT
How is the physical environment changing?
Which environmental drivers affect your business?
How does the environment impact your business?
How does environmental change shape your industry?

- Climate Δ results in Δ in needs in cities
- Society cares about the environment
- Environmental focus. → Clients → ESG standards

ECONOMY
What is the economic environment?
Locally? Regionally? Nationally? Globally?
How does the economic climate affect the ecosystem of your business, customers and employees?

- GLOBALIZATION 3.0
- Efficiency Drive
- Wealth is defined by adaptability of societies + people to change

POLICY
What policies, laws and regulations shape what new regulations will be required to get how much to your business is shaped by law?

- PERFORMANCE BASED CODES
- Integrity is a more visible theme due to global interactions

DECREASING
Which factors are decreasing?

- MEGA CITIES = INFRASTRUCTURE BUILDING "BOOM"
- NEED FOR RECONNECTION TO REALITY OF BUILDING
- STRUCTURAL EVOLUTION IN THE DESIGN & DELIVERY PROCESS & TEAMS
- WE NEED MUST PAY ATTENTION NOT OPTIONAL
- HUGE OPPORT TO ENHANCE MODELLING & DESIGN TOOLS
- Global structural changes in industry investments

IMPLICATIONS
What are the implications of these drivers?

END OF CAPITALISM - What is the new 'ISM'

Integrity is a more visible theme due to global interactions

Forces on our sector cannot be denied... to do so is like putting lipstick on a pig

The image contains several hand-drawn diagrams and illustrations. On the right side, there are three pig faces drawn in purple and red. The top pig has a purple body and a red smile. The middle pig is red with a purple smile. The bottom pig is purple with a red smile. There are also several arrows and flowcharts. One diagram shows a circle with '85%' inside, with arrows pointing outwards. Another diagram shows a central figure with arrows pointing towards it from both sides. A large box on the right contains the text 'Forces on our sector cannot be denied... to do so is like putting lipstick on a pig'. At the bottom right, there is a pig face with arrows pointing towards it from both sides, and a large arrow pointing to the right.

GLOBAL DRIVERS

TEAM FOUR: Increasing client consumer expectation of Integrated Data.

FRAME01

GLOBAL DRIVERS

MANAGE + DESIGN + BUILD

What are the broad forces shaping your industry?

#4

SOCIETY

How is society changing?
How are people changing? Physically? Emotionally? Physically?
What are people doing more of? Less of?
What trends do you see in cultural behaviors, values and beliefs?

INCREASING

Which factors are growing?

SOCIETY

- People want greater degree of social engagement in all aspects of life.
- DESIGN QUALITY EXPECTATIONS
- CLIENT EXPECTATIONS - LOST IMPLICATIONS
- AVERAGE IN INDUSTRY COUNTRY

TECHNOLOGY

How is technology evolving?
Which tools - digital and physical - are having an impact on the way your industry works?
Which technologies have the greatest potential to advance and disrupt your industry?

DECREASING

Which factors are declining?

TECHNOLOGY

- SPEED OF IT HAS INCREASED EXPECTATION OF DESIGN/CONSTRUCTION SPEED
- Cloud based solutions - client's req high level of becoming necessary
- Sensor Tech
- Big Data + Cloud Computing
- Analytic Visualization Outside Design Apps
- Environment: People want "the emission meet" incorporated into messaging increasingly
- Data/File Sizes
- Number of Systems
- UNCERTAIN FUTURE STATE - DEBT IMPACT
- Bim is Government Requirement
- Tech brings increasing complexity - little relief
- IMPACT ON ECONOMY - UNCERTAINTY RETARDS INVESTMENT
- INCREASING CLIENT/CONSUMER EXPECTATION OF INTEGRATED DATA + PROCESS
- EG. BUILDING DATA PROVIDE MODEL FOR TV AD + INTERNET ROOM SELECTOR ON GOOGLE MAPS
- Policy seems decreasingly relevant to modern/current tech. lawmakers out of touch
- Need to redefine and reimagine regulations in a tech-led world
- Data skin opens up platform
- CONSUMER SERVICE SET EXPECTATIONS FOR BIZ SERVICE
- BIG DATA NEEDS TO BE ABSORBED IN INTEGRATED SYSTEMS
- MICRO SAS
- Cost of Integrating Systems
- PLATFORMS BECOME INCREASINGLY IMPORTANT
- PRODUCT SERVICE ECOSYSTEMS
- Innovation brings opportunity for explosive growth - if recognized + harnessed
- GLOBAL ECONOMY MAKES TIMELY INFORMATION CRITICAL FOR DECISION MAKING
- COMBINATORIAL INNOVATION SWARMING FADS
- ANTICIPATE INHABITANTS NEEDS
- CLIENTS WANT INTEGRATION - SHARING META DATA -> 1 DATABASE
- DESIGN BUILD OPERATE TRAINING

IMPLICATIONS

What are the implications for your industry?

GLOBAL DRIVERS

TEAM FIVE: Friendlier tools, better processes, lowers the barriers to sustainable manufacturing.

FRAME01 #5 DESIGN & MFG

What are the broad forces shaping your industry?

SOCIETY

How is society changing?
How are people changing? Physically? Emotionally? Psychically?
What are people doing more of? Less of?
What trends do you see in cultural behaviors, values and beliefs?

INCREASING
Which factors are growing?

- PEOPLE ARE SPENDING MORE TIME BALANCING THEIR LIVES.
- more IT-connected young people
- PEOPLE ARE BECOMING MUCH MORE CONCERNED ABOUT THE ENVIRONMENT
- GLOBAL AWARENESS IS INCREASING QUICKLY
- Global awareness
- Social digital life
- travels
- collaboration

DECREASES
Which factors are decreasing?

- velocity of communication is faster and faster
- VIRTUAL TEAMS
- IT DISTRIBUTION

IMPLICATIONS
What do these trends mean?

- THE AMOUNT OF TIME PEOPLE ARE WILLING TO LEARN/ADAPTING TO NEW TECHNOLOGIES
- PEOPLE ARE SPENDING LESS TIME ONLY FOCUSING ON THEIR CAREERS
- BROADER NETWORK
- LOCATION BASED SERVICES DECREASE
- SKILLED ENGINEERS
- what is right or wrong
- question of quality
- VIRTUAL TEAMS
- EVOLUTION OF ROLES
- AUTOMATED DECISIONS
- RESPONSIBILITY

TECHNOLOGY

How is technology evolving?
Which tools - digital and physical - are having an impact on the way your industry works?
Which technologies have the greatest potential to advance and disrupt your industry?

INCREASING

- HIGHER LEVEL OF CONNECTION/DISRUPTION
- cloud computing
- CROSS DISCIPLIN
- SIMPLIFICATION OF TOOLS
- fast and pervasive communication
- big data analytics
- mobile

DECREASES

- LOCATION BASED SERVICES DECREASE
- SKILLED ENGINEERS

IMPLICATIONS

- DESIGN ROLES ARE CHANGING SIGNIFICANTLY AS NEW IDEAS CAN BE TESTED & PROVEN WITH COMPUTER MODELING.
- globalization => technology is available everywhere
- IMPLICATIONS
- TOOLS NEED TO BE MUCH MORE USER FRIENDLY & FAST
- SECURITY INFORMATION

ENVIRONMENT

How is the physical environment changing?
Which environmental drivers affect your business?
From local living conditions to global changes.
How does environmental change shape your industry?

INCREASING

- ENVIRONMENTAL CONCERNS ARE DEMANDING PRODUCTS BE RECYCLABLE
- AVAILABILITY OF TOOLS
- SUSTAINABILITY

DECREASES

- Reduce pollution
- Energy saving

IMPLICATIONS

- INNOVATE PRODUCTS
- INNOVATE MANUFACTURING PROCESSES

ECONOMY

What is the state of the economy?
Locally? Regionally? Nationally? Globally?
How does the economic climate affect the ecosystem of your suppliers, customers and employees?

INCREASING

- DELIVERY TIMES
- QUALITY
- growth of digital economy
- stagnation of mature economy
- supply chain distribution -> logistic
- financial investment reduced
- more complex -> hetero
- IT-Systems by merger & acquisitions

DECREASES

- ENTRY COSTS
- THREATS MOVE TO LOW COST MFG.
- entry costs
- large 'BEARS' HAVE LESS MARKET CONTROL

IMPLICATIONS

- INTELLIGENT PRODUCTION
- STANDARD PLANTS
- FRAMEWORK DESIGN

POLICY

What policies, laws and regulations shape your industry?
What new regulations will attempt to constrain your business?
How much is your business shaped by regulation?

INCREASING

- POLICIES INTERNAL & EXTERNAL INCREASING
- IP-Protection is a growing topic

IMPLICATIONS

As design/engineering tools become more user friendly combined with new flexible manufacturing processes, people are developing and producing innovative new solutions much more less negative impact on the environment, very capable of being deployed anywhere in the world, unlike the old barrier to entry, and much more difficult to protect from an IP perspective, for larger industries engineering standardization will be the "value" & it's IP whereas the small will be speed to market, flexibility and user/friend friendly.

AUTODESK. Common Operating System

IDEAS THE INNOVATION + DESIGN SERIES

5

GLOBAL DRIVERS

TEAM SIX: Economic disparity and global connectedness is forcing agility & strategic balance.

FRAME 01 GLOBAL DRIVERS

⑥ DESIGN + CONSTRUCTION

What are the biggest drivers forcing your industry?

ECONOMIC DISPARITY & GLOBAL CONNECTEDNESS IS FORCING OUR INDUSTRY TO BE AGILE / STRATEGIC & DYNAMIC TO FIND THE RIGHT BALANCE

SOCIETY

- INCREASED IMPATIENCE
- MILLENNIALS (YOUNG WORKERS) AREN'T INTERESTED IN TRADITIONS, PAYING DUES, OR OLD STRUCTURES
- THE "PEOPLE" WITH INFLUENCE ARE CORPS
- Reliance on Social Media
- Crackdown between Secular Gov. and Religious Gov.
- SOCIO-POLITICAL OPINIONS & DISCUSSIONS MORE POLARIZED THAN EVER
- PEOPLE ARE MORE:
 - MOBILE
 - GLOBALLY MIND
 - BUSY
- URBANISATION OF SOCIETY
- CO-WORKING & TELECOMMUTING INCREASING
- SOCIAL FACE TO FACE CONTACT
- FAMILY UNIT (WHICH?)

TECHNOLOGY

- TECHNOLOGY SOCIETIZED
- HOW DO WE LEVERAGE?
- Drive to mobile
- ENABLING COST THIRD MOBILE VISUALIZATION
- EVERYTHING FASTER MUCH FASTER
- Availability of big data to model existing
- TOOLS ARE COMING MORE AND MORE
- FUTURE
- Decreasing Pace of Electronics in innovation
- URBAN SPEED OF CHANGE IMPACT ON SOCIETY HAS HUBS

ENVIRONMENT

- INCREASING COMPETITION FOR RESOURCES → HIGHER PRICES
- FUKUSHIMA MAY DESTROY ENTIRE PACIFIC FOOD SUPPLY
- CLIMATE CHANGE → ↑ MIGRATION
- ↑ EXTREME WEATHER
- CAPACITATING FOOD SUPPLY
- INCREASING RESOURCE RECYCLING & COMPOSTING (INDUSTRIAL & RESIDENTIAL)
- Less focus on "Green Bling"
- Tolerance for sub-standard / less than excellent conditions
- Increasing Need for Disaster Mitigation
- FOOD SUPPLY WILL DRIVE ECONOMICS & MIGRATION
- CLIMATE CHANGE EFFECT / KNOCK-OUT
- RISK MANAGEMENT (COSTS) MAY BECOME CRITICAL DECISION DRIVERS

ECONOMY

- Global center of economy moving to the East.
- China moving outside China
- INCREASING INSTABILITY OF GLOBAL & MARKETS
- Non Proven DESIGN
- Global economy must have an Asia agenda
- Trade Barriers, Duties, Taxes, Slow Rate of Change
- International competition in a Jeopardy
- THE CAPABILITIES CONSIDERED "TRIPLE SPACES" FAR FROM MASTERED INDUSTRIAL
- IS EXPERTISE BEING COMMODITIZED? NEED FOR LESS / MORE THE RIGHT REGULATION

IMPLICATIONS

- Need for workforce to be globally mobile / connected
- Impacts of increase in home or remote working
- IS THERE A WORK/LIFE BALANCE? SEPARATION?
- POPULATION DENSITY IN URBAN LOCATIONS
- UNDERSTAND YOUR CUSTOMERS BUSINESS
- Need for global resource base
- COMPETITION FOR ATTENTION
- DO PEOPLE NEED / WANT LESS SPACE TO WORK & LIVE?
- Safety of People
- CAPABILITIES CONSIDERED "TRIPLE SPACES" FAR FROM MASTERED INDUSTRIAL
- "Water day"
- Shorter time between need to refresh technology
- PATENT IS CRITICAL
- Global economy must have an Asia agenda
- Trade Barriers, Duties, Taxes, Slow Rate of Change
- International competition in a Jeopardy
- THE CAPABILITIES CONSIDERED "TRIPLE SPACES" FAR FROM MASTERED INDUSTRIAL
- IS EXPERTISE BEING COMMODITIZED? NEED FOR LESS / MORE THE RIGHT REGULATION

Other notes:

- GLACIAL SPEED OF CHANGE COMPARED TO TECH & EXPECTATIONS
- POLICY IS DRIVEN BY LOBBYING & "CABLE NEWS"
- NO INTERNATIONAL REGULATIONS STANDARDS
- FEWER ISOLATED STATES BUT MORE EXTREME
- Policy Change Does Not Keep Up With Changes in Society
- LONG-TERM THINKING
- INCREASING CEASELEADS TO FUZZING OF GEO POLITICAL DIVISIONS
- Global economy must have an Asia agenda
- Trade Barriers, Duties, Taxes, Slow Rate of Change
- International competition in a Jeopardy
- THE CAPABILITIES CONSIDERED "TRIPLE SPACES" FAR FROM MASTERED INDUSTRIAL
- IS EXPERTISE BEING COMMODITIZED? NEED FOR LESS / MORE THE RIGHT REGULATION

IDEAS THE INNOVATION + DESIGN SERIES

⑥

GLOBAL DRIVERS

TEAM SEVEN:
Give people stories they love.

FRAME01 GLOBAL DRIVERS ENTERTAINMENT #7

What are the broad forces shaping your industry?

SOCIETY
How is society changing? Physically? Emotionally? Psychically? What are people doing more of? Less of? What trends do you see in cultural behaviors, values and beliefs?

TECHNOLOGY
How is technology evolving? Which tools - digital and physical - are having an impact on the way your industry works? Which technologies have the greatest potential to advance the front of your industry?

ENVIRONMENT
How is the physical environment changing? Which environmental drivers affect your business? From local living conditions to global changes. How does environmental change shape your industry?

ECONOMY
What is the state of the economy? Locally? Regionally? Nationally? Globally? How does the economic climate affect the ecosystem of your suppliers, customers and employees?

POLICY
Which laws, rules and regulations shape your industry? How do government policies control or constrain your business? Do you work in?

Handwritten Notes:

- SOCIETY:** ENTERTAINMENT ON DEMAND ALL TITLES ALL THE TIME; Expectation of Participation; MOBILITY CONNECTED ACCESS DIGITAL CONSUMPTION; # ACCESSIBLE CONSUMERS INCREASING; ABILITY TO CONTROL RELEASE WINDOWS; PEOPLE'S ATTENTION SPAN IS DECREASING; PRODUCT VALUE DECREASING; NO RELEASE WINDOWS; OUR PRODUCTS MUST CHANGE
- TECHNOLOGY:** UTILIZING PRE-VIS IN DESIGN DEVELOPMENT; VISUALS INCREASING IN COMPLEXITY; LOWER BARRIER TO ENTRY; DIGITAL TOOLS MODEL REAL PHYSICS; CREATION OF NEW TOOLS AND TECHNIQUES REQUIRES INCREASED TIME; DIGITAL TOOLS FOR PRE-CONSTRUCTION VISUALIZATION; TRAINING INCREASES WITH TECH ADVANCES; IMAGE CREATION RELIES MORE AND MORE ON SIMULATION; MOBILE PC/W/STATION DATA CENTRE
- ENVIRONMENT:** UNSUSTAINABLE INCREASE IN POWER CONSUMPTION; ARTIST SKILLS UNSTABLE UNPREDICTABLE CREATIVE
- ECONOMY:** TV REVENUE; DVD SELL THRU LESS \$; PRODUCTION COSTS; LOW QUALITY MOVIES DON'T MAKE AS MUCH \$; LABOR COST MORE DOMINANT THAN TECH COST IN FUTURE?; REVENUE MUST BE REALIZED IN SHORT TIME CYCLE; MORE SEQUELS LESS RISK; \$1 Bn. PRICE OF ENTRY
- POLICY:** INTERNATIONAL TAX INCENTIVES REQUIRE MORE REMOTE WORKFORCE; NETWORK SUBSIDY DE-VALUES CONTENT; OSHA ADA; ENERGY CONSERVATION; NOTHING; WORK LEAVING AMERICA; CAPITAL IN US PRODUCTION IN NON-US

EVOLUTION Biz Model
can't forget - People love stories!!

AUTODESK. Common Operating Frameworks

IDEAS THE INNOVATION + DESIGN SERIES

7

FRAME 02 INDUSTRY STRUCTURE



FRAME 02

INDUSTRY STRUCTURE

Each group explored the underlying structure of their industry through the Porter Five Forces Model:

- Supplier Bargaining Power
- Customer Buying Power
- Threat of New Entrants
- Threat of New Substitutions
- Competitive Churn

Each Industry charted the nodes and links of each system and presented their findings.

FRAME02 INDUSTRY STRUCTURE

What are the dynamics within your industry?

SUPPLIERS

Who are your suppliers?
What products and services do they provide? Who is indispensable?



BUYERS

Who are your buyers?
What offerings are most important to them?



SUPPLIER BARGAINING POWER

Powerful suppliers can charge higher prices or insist on more favorable terms, lowering industry profits. When suppliers serve alternative industries, they exert more force on any one industry.

COMPETITIVE RIVALRY

What is the nature of the industry competition: Price? Quality? Speed? Reliability? How do they differentiate themselves? Illustrate how the industry players battle for business.

BUYER BARGAINING POWER

Powerful buyers can force prices down or demand more value in the product, capturing more of the value for themselves. When buyers see little differentiation in the industry's products, they have the power to pit one vendor against another.

NEW ENTRANTS

Entry barriers protect an industry from newcomers who would add new capacity and seek to gain market share.



THREAT OF NEW ENTRANTS

Entry barriers protect an industry from newcomers who add new capacity. What are the specific barriers to entry? How might these barriers be lowered or raised?

THREAT OF SUBSTITUTIONS

Effective substitutes can provide an attractive price performance trade-off relative to the industry's product. They put a cap on industry profitability.

SUBSTITUTE SOLUTIONS

Substitutes are offerings that meet the same basic needs as the industry's product, but in a different way. Substitutes are not direct rivals, they often come from unexpected places. This makes substitutes difficult to anticipate or even to see once they appear.



FRAME02

INDUSTRY STRUCTURE

SUPPLIERS

*Who are your suppliers?
What products and services do they
provide? Who is indispensable?*



BUYERS

*Who are your buyers?
What offerings are most important to them?*



BUYER

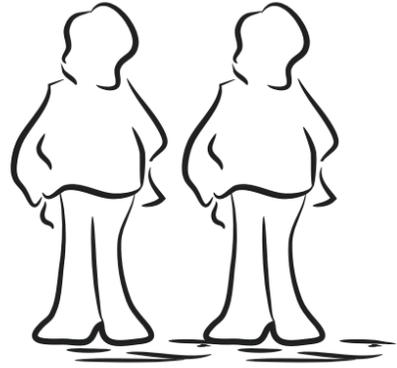
SUBSTITUTE SOLUTIONS

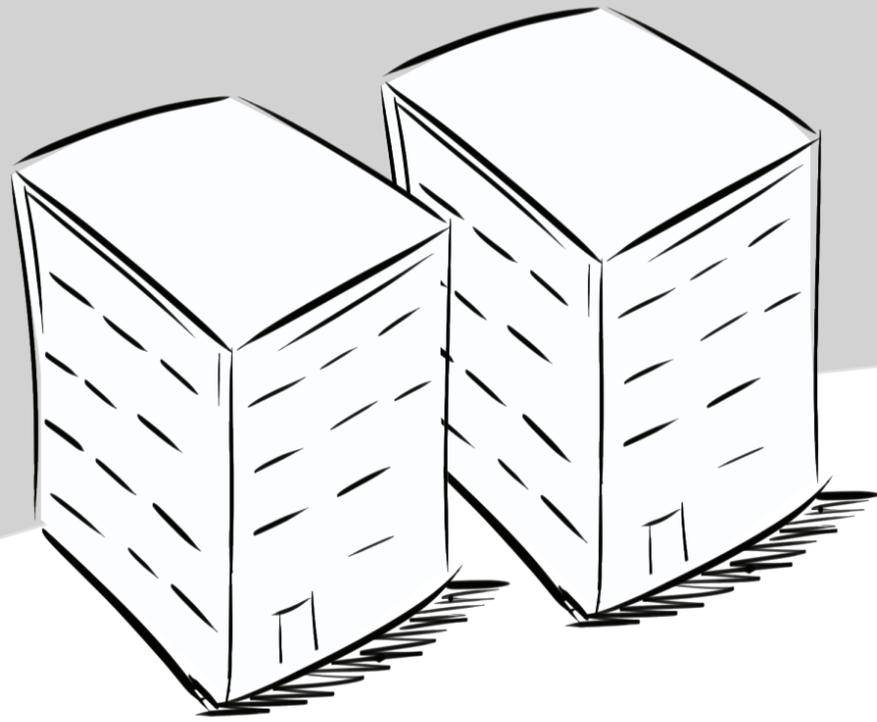
Substitutes are offerings that meet the same basic needs as the industry's product, but in a different way. Substitutes are not direct rivals, they often come from unexpected places. This makes substitutes difficult to anticipate or even to see once they appear.



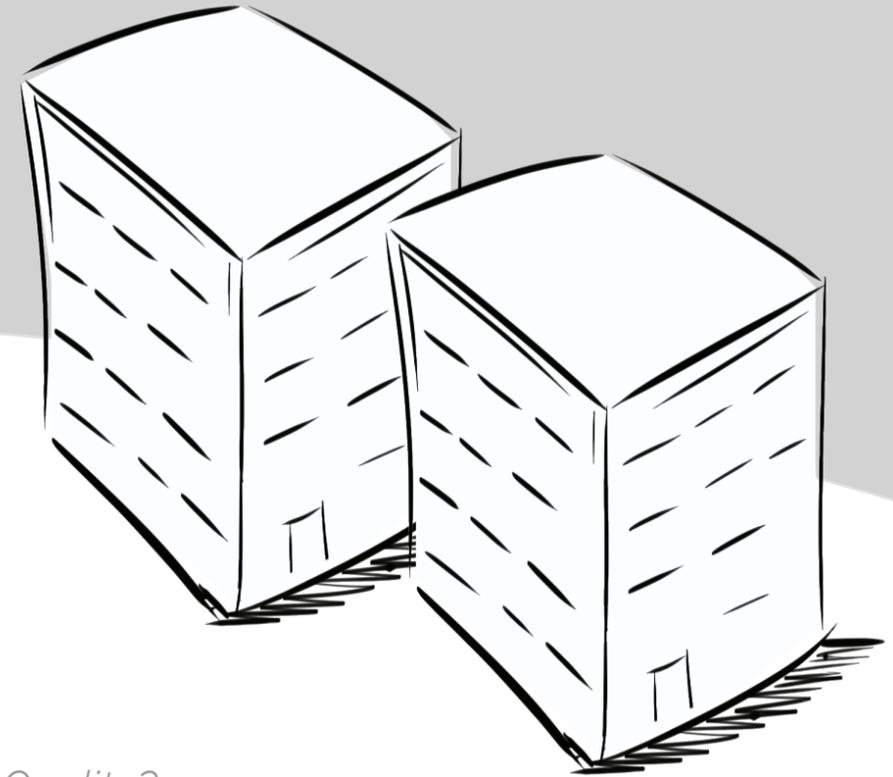
NEW ENTRANTS

Entry barriers protect an industry from newcomers who would add new capacity and seek to gain market share.





COMPETITIVE RIVALRY



What is the nature of the industry competition: Price? Quality? Speed? Reliability? How do they differentiate themselves? Illustrate how the industry players battle for business.

FRAME02 INDUSTRY STRUCTURE

What are the dynamics within your industry?

SUPPLIERS

Who are your suppliers?
What products and services do they provide? Who is indispensable?



BUYERS

Who are your buyers?
What offerings are most important to them?



SUPPLIER BARGAINING POWER

Powerful suppliers can charge higher prices or insist on more favorable terms, lowering industry profits. When suppliers serve alternative industries, they exert more force on any one industry.

COMPETITIVE RIVALRY

What is the nature of the industry competition: Price? Quality? Speed? Reliability? How do they differentiate themselves? Illustrate how the industry players battle for business.

BUYER BARGAINING POWER

Powerful buyers can force prices down or demand more value in the product, capturing more of the value for themselves. When buyers see little differentiation in the industry's products, they have the power to pit one vendor against another.

NEW ENTRANTS

Entry barriers protect an industry from newcomers who would add new capacity and seek to gain market share.



THREAT OF NEW ENTRANTS

Entry barriers protect an industry from newcomers who add new capacity. What are the specific barriers to entry? How might these barriers be lowered or raised?

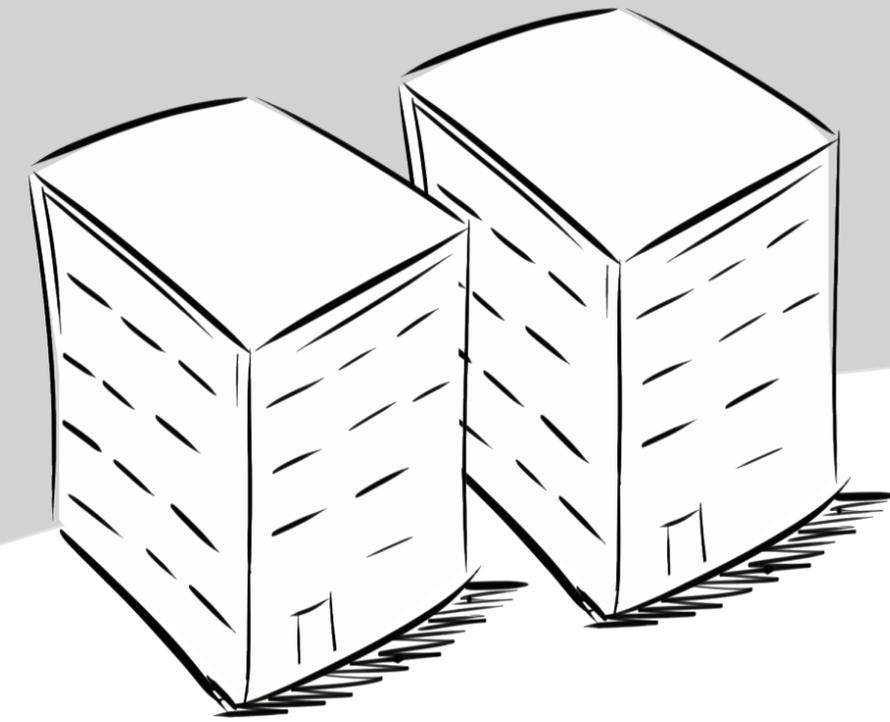
THREAT OF SUBSTITUTIONS

Effective substitutes can provide an attractive price performance trade-off relative to the industry's product. They put a cap on industry profitability.

SUBSTITUTE SOLUTIONS

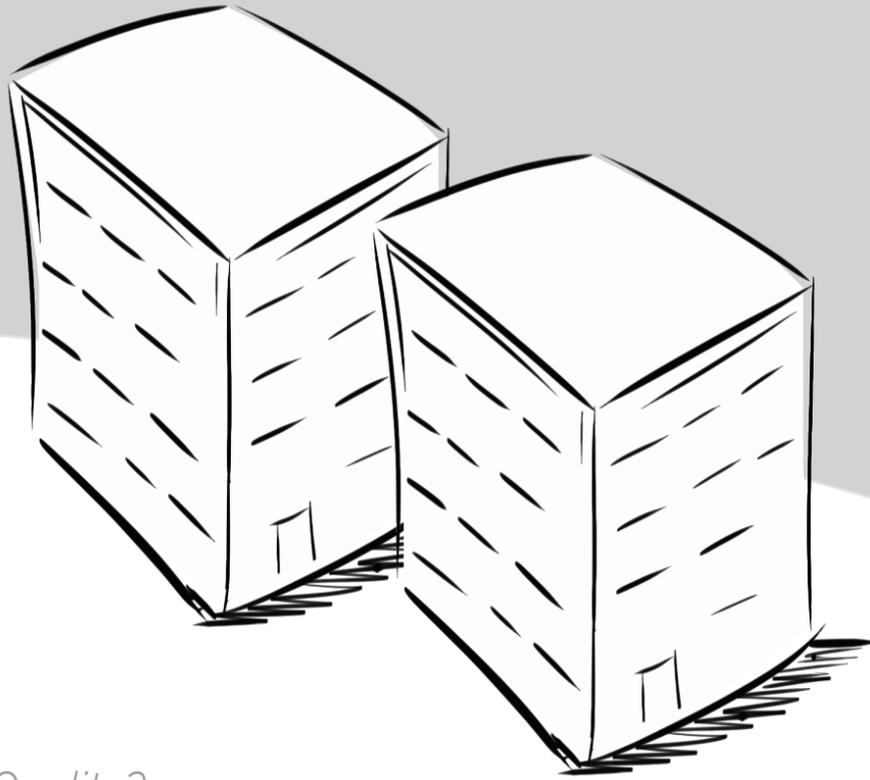
Substitutes are offerings that meet the same basic needs as the industry's product, but in a different way. Substitutes are not direct rivals, they often come from unexpected places. This makes substitutes difficult to anticipate or even to see once they appear.





SUPPLIER BARGAINING POWER

Powerful suppliers can charge higher prices or insist on more favorable terms, lowering industry profits. When suppliers serve alternative industries, they exert more force on any one industry.



e? Quality?
elves?
s.

BUYER BARGAINING POWER

Powerful buyers can force prices down or demand more value in the product, capturing more of the value for themselves. When buyers see little differentiation in the industry's products, they have the power to pit one vendor against another.

The background features a large, light blue, diamond-shaped shape with a dark grey outline, tilted slightly to the right. This shape overlaps with a larger, solid grey shape on the left and bottom. The overall composition is minimalist and modern.

THREAT OF SUBSTITUTIONS

Effective substitutes can provide an attractive price performance trade-off relative to the industry's product. They put a cap on industry profitability.

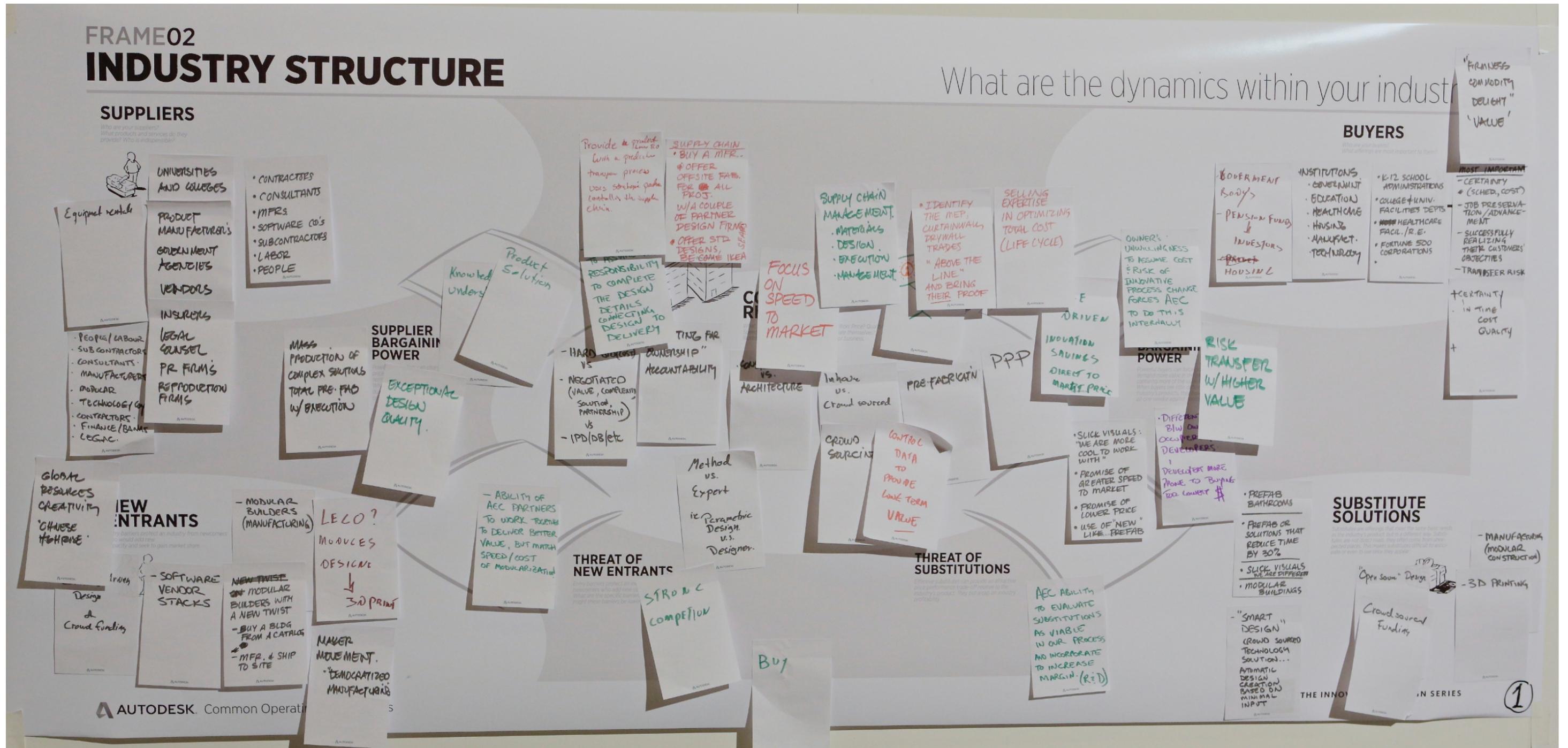


THREAT OF NEW ENTRANTS

Entry barriers protect an industry from newcomers who add new capacity. What are the specific barriers to entry? How might these barriers be lowered or raised?

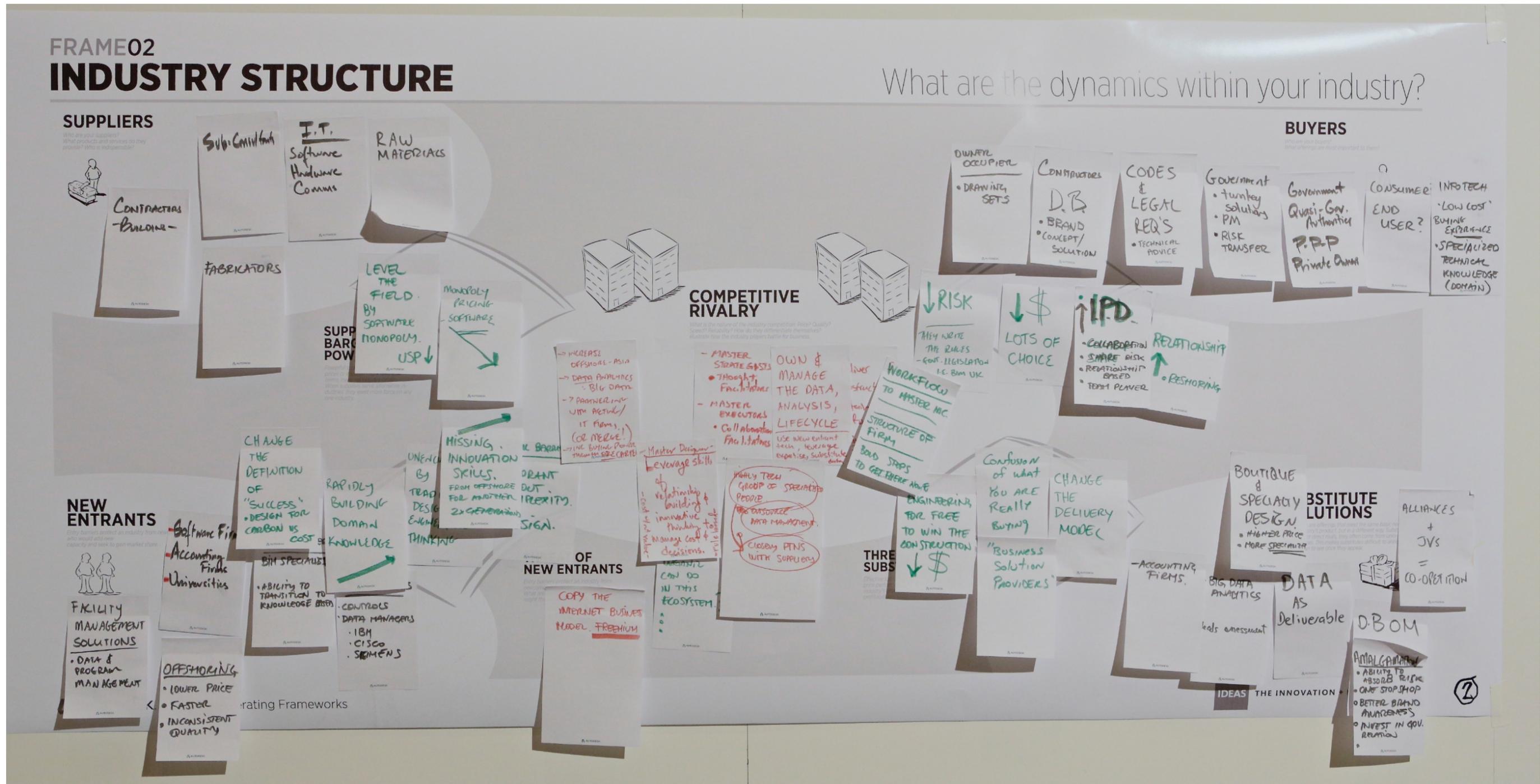
INDUSTRY STRUCTURE

TEAM ONE: AEC Focus on Speed to Market, Own the Supply Chain and Control Data



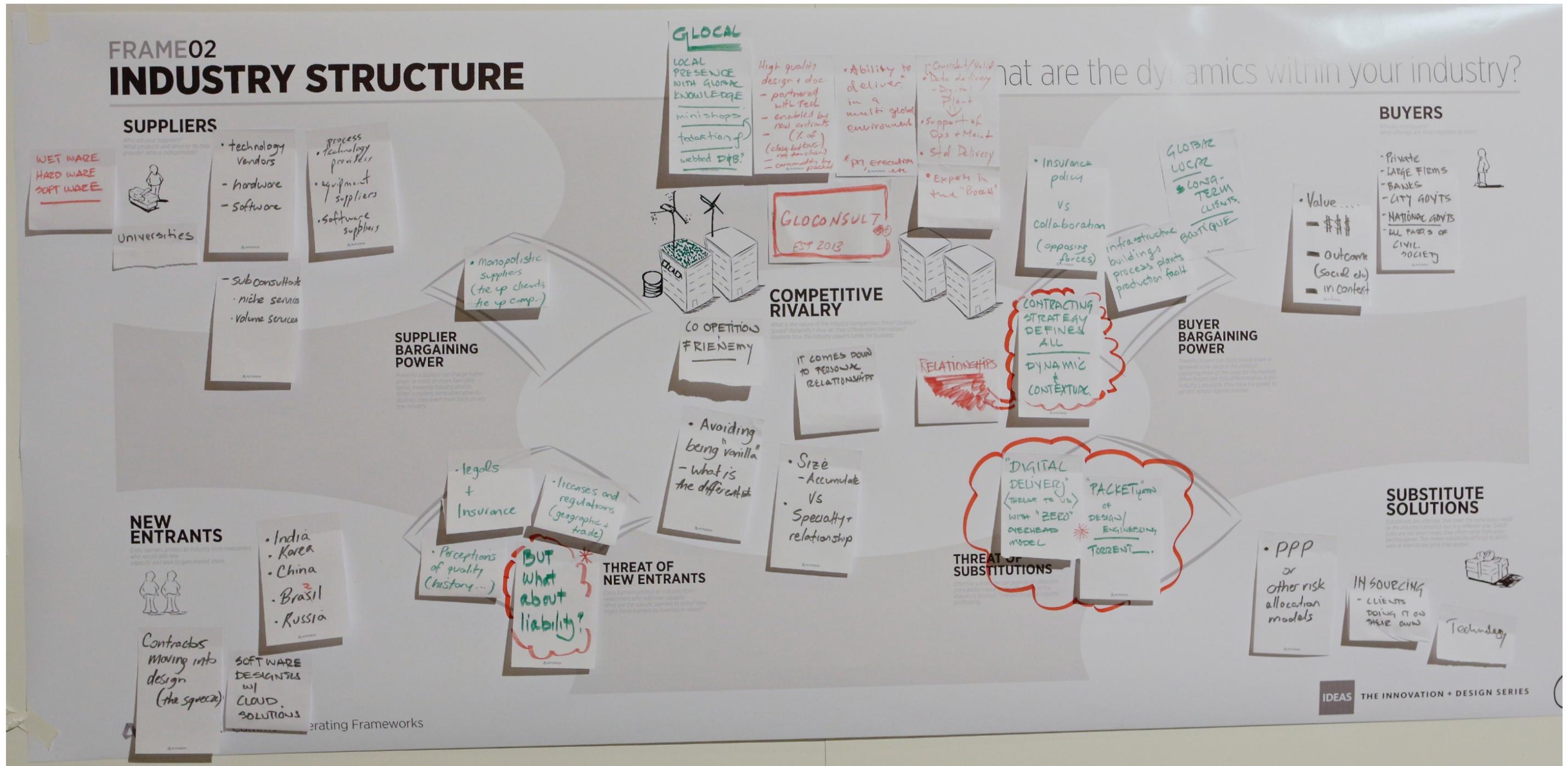
INDUSTRY STRUCTURE

TEAM TWO: AEC Own and manage the data analysis lifecycle. Leverage Skills. Copy the Internet Premium Business Model.



INDUSTRY STRUCTURE

TEAM THREE: Built Environment
 GlobalLocal Consulting Business Model using
 new Entrants to use Digital Data Backbone.



INDUSTRY STRUCTURE

TEAM FOUR: Design & Build Create an integrated cloud-based design environment with uniformity, compliance, security and harmony.

FRAME02 INDUSTRY STRUCTURE

What are the dynamics within your industry?

SUPPLIERS

Who are your suppliers? What products and services do they provide? Who is indispensable?



- Software Vendors
- Fabricators
- Engineering Companies
- Hardware/IT Vendors
- Software Providers
- Specialty Consultants
- Hardware Providers

SOFTWARE DOMINANCE IMPACTS INNOVATION

WILL MATERIALS BECOME SMART?

FEW OR NO EXAMPLES OF SUPPLIERS WITH DIFFERENTIATION EXCEPT AUTODESK

UPGRADE CYCLE MUST BE COORDINATED ACROSS SUPPLIERS + BUYERS (OPEN MOUNTAIN RUNNING MULTIPLE VERSIONS)

WHAT ABOUT COMPETITOR COOPERATION?

SHARED LIABILITY

BUYERS LOOKING FOR CLARITY ON LIABILITY (RISK OWNER) BUT RISK CAN BE DIFFUSED

- Customers
- EPC M's

BUYERS

What are their needs? What offerings are most important to them?



- Private Industry
- Public Sector
- > value
- > quality
- > creativity (sometimes)
- > technology
- > innovation

- CLIENTS:
 - GOV'T
 - FEDERAL
 - STATE, ETC.
 - PRIVATE:
 - HEALTH
 - EDUCATION
 - CORP/COMM

BUYERS HAVE MORE POWER THAN SUPPLIERS CHOICE OF COMMODITY SUPPLIERS (IF LOW EXPECTATIONS)



BUYER BARGAINING POWER

COMPETITIVE RIVALRY

What is the nature of the rivalry? Competition? Price? Quality? Speed? Reliability? How do they differentiate themselves? How do the industry players battle for business?

NEW IDEAS CREATE VALUE

Niche Market Supplier

VALUE IS CREATED BY IDEAS

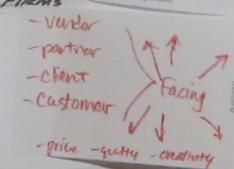
- Owners
- Engineers
- Software Suppliers

Competition Centering on price + speed.

BEING FLEXIBLE TO MEET CUSTOMER EVER CHANGING NEED/EXPECT.

- PEER DESIGN FIRMS
- CONSTRUCTION COMPANIES
- CONSULTING FIRMS - E.G. IBM
- REAL ESTATE/INVESTMENT FIRMS

integrated, cloud-based design environment - uniformity - compliance - security - harmony "close the loop"



Can a design be productized + commoditized - repeatable - predictable - value

DESIGNING CREATIVE SOLUTIONS TO CLIENTS GREATEST CHALLENGES - DELIVERING VALUE

BUILDING IS "OPEN LOOP" - FRAGMENT VS MANUFACTURING IS "CLOSED LOOP" - CONTINUOUS



NEW ENTRANTS

Entry barriers protect an industry from newcomers who would add new capacity and seek to gain market share.



- EMERGING GLOBAL DESIGN FIRMS - (LOWER COST) BASE

- OPEN SOURCE
- GOOGLE
- AMAZON

Software Companies Now playing in Engineering SPACE.

Smaller Dynamic Companies.

THREAT OF NEW ENTRANTS

Entry barriers protect an industry from newcomers who add new capacity. What are the specific barriers to entry? How might these barriers be lowered or bypassed?

Company that works jointly with customer & owns software/development solution. Works closely with supplier to enhance transfer & integration.

THREAT OF SUBSTITUTIONS

Alternative products or services that meet the same basic needs as the industry's product, but in a different way. Substitutes are not direct rivals; they often come from completely different industries. This makes substitutes difficult to anticipate or even to see once they appear.

LIABILITY IS ALSO A THREAT LARGE COST HINDERS COOPERATION

GOVERNMENT MANDATED BUILDING DATA STANDARDS

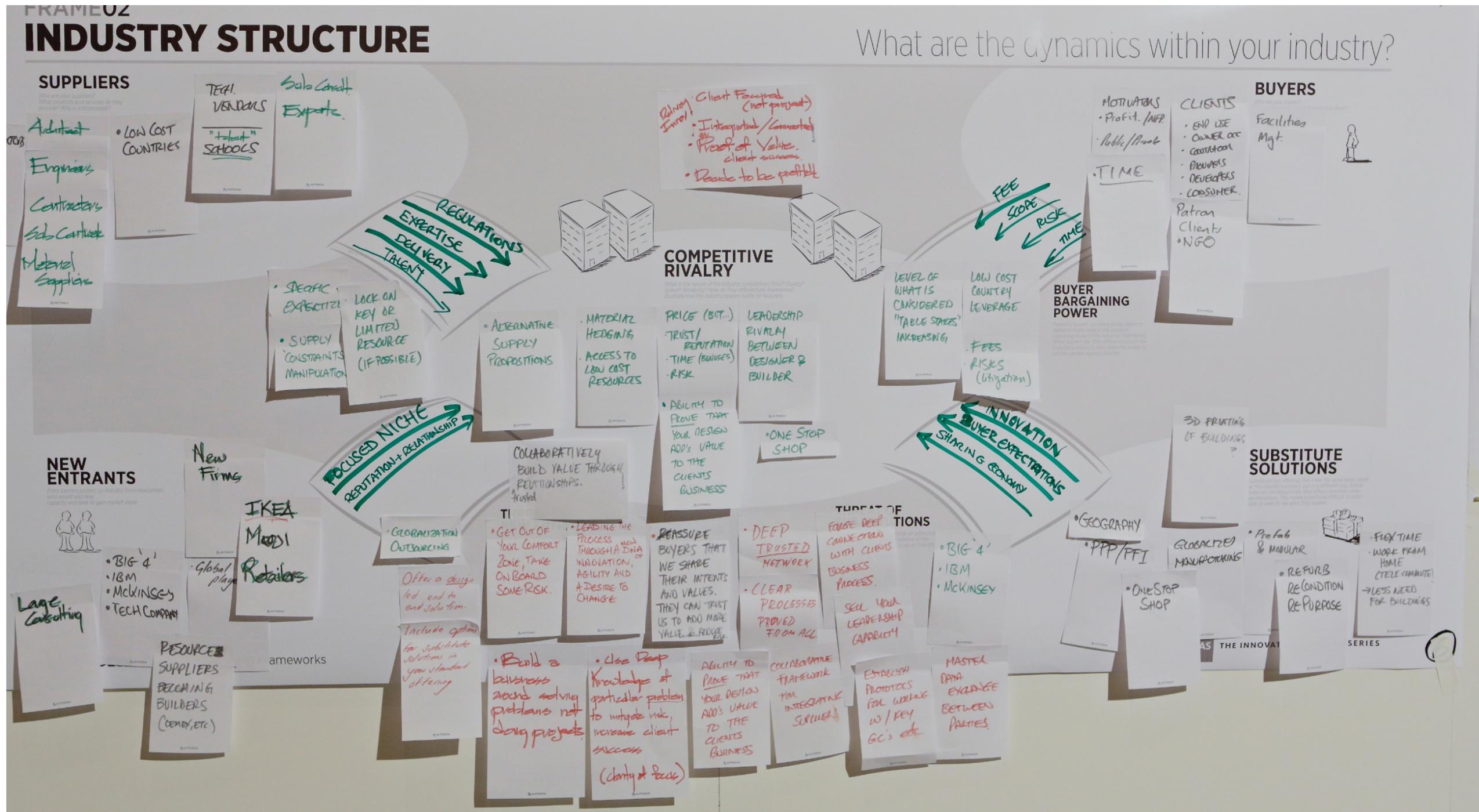
SUBSTITUTE SOLUTIONS

Substitutes are offerings that meet the same basic needs as the industry's product, but in a different way. Substitutes are not direct rivals; they often come from completely different industries. This makes substitutes difficult to anticipate or even to see once they appear.



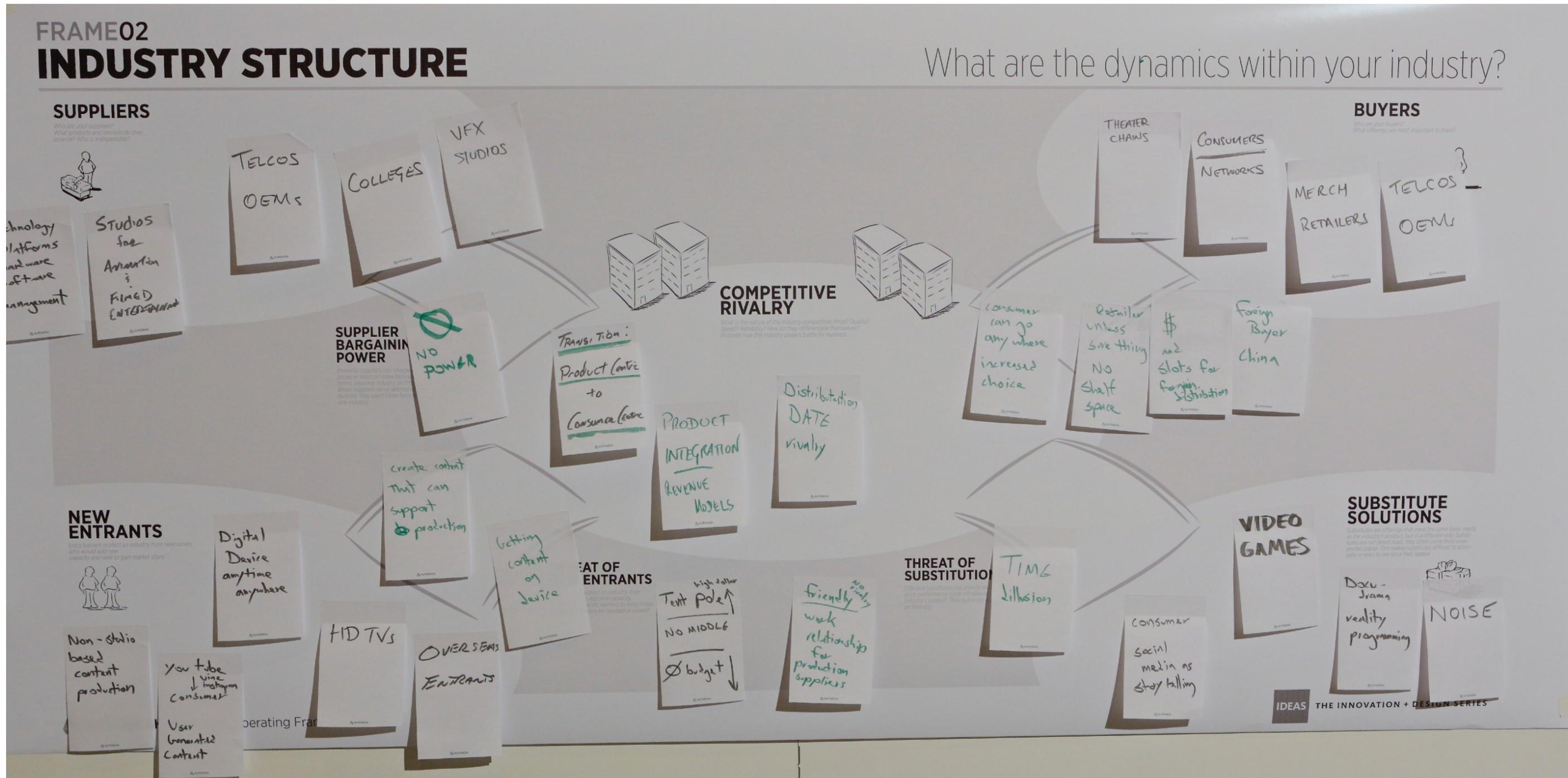
INDUSTRY STRUCTURE

TEAM SIX: Design & Construction
 Create client focused,, connected consultancy.
 Focus on solving problems, not projects.



INDUSTRY STRUCTURE

TEAM SEVEN: Entertainment
Create a business model that goes outside of traditional timing and structured development.



FRAME 03 INDUSTRY LIFECYCLE / WORKFLOW



FRAME 03 INDUSTRY LIFECYCLE / WORKFLOW

Each group charted the current set of processes to create value and identified pain points, issues, and risks.

Simple line drawings chart the rise and fall of risk and profits across the project lifecycle.

Each group used this as an opportunity to identify improvement, largely by integrating emerging technologies that enable new processes.

FRAME03 INDUSTRY LIFECYCLE & WORKFLOW

How is value created in your organization?

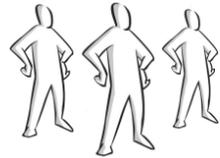
PHASES OF WORK

What are the major stages of value creation?



STAKEHOLDERS

Who is involved in making work happen?



OUTPUTS

What are the major deliverables?



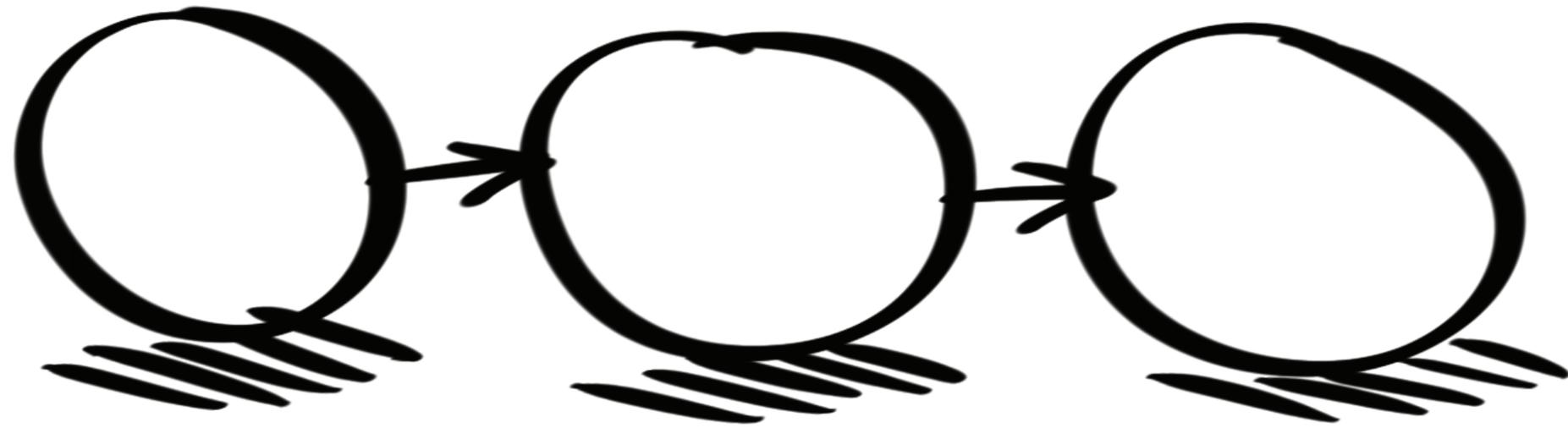
TOOLS

What technologies augment value creation?



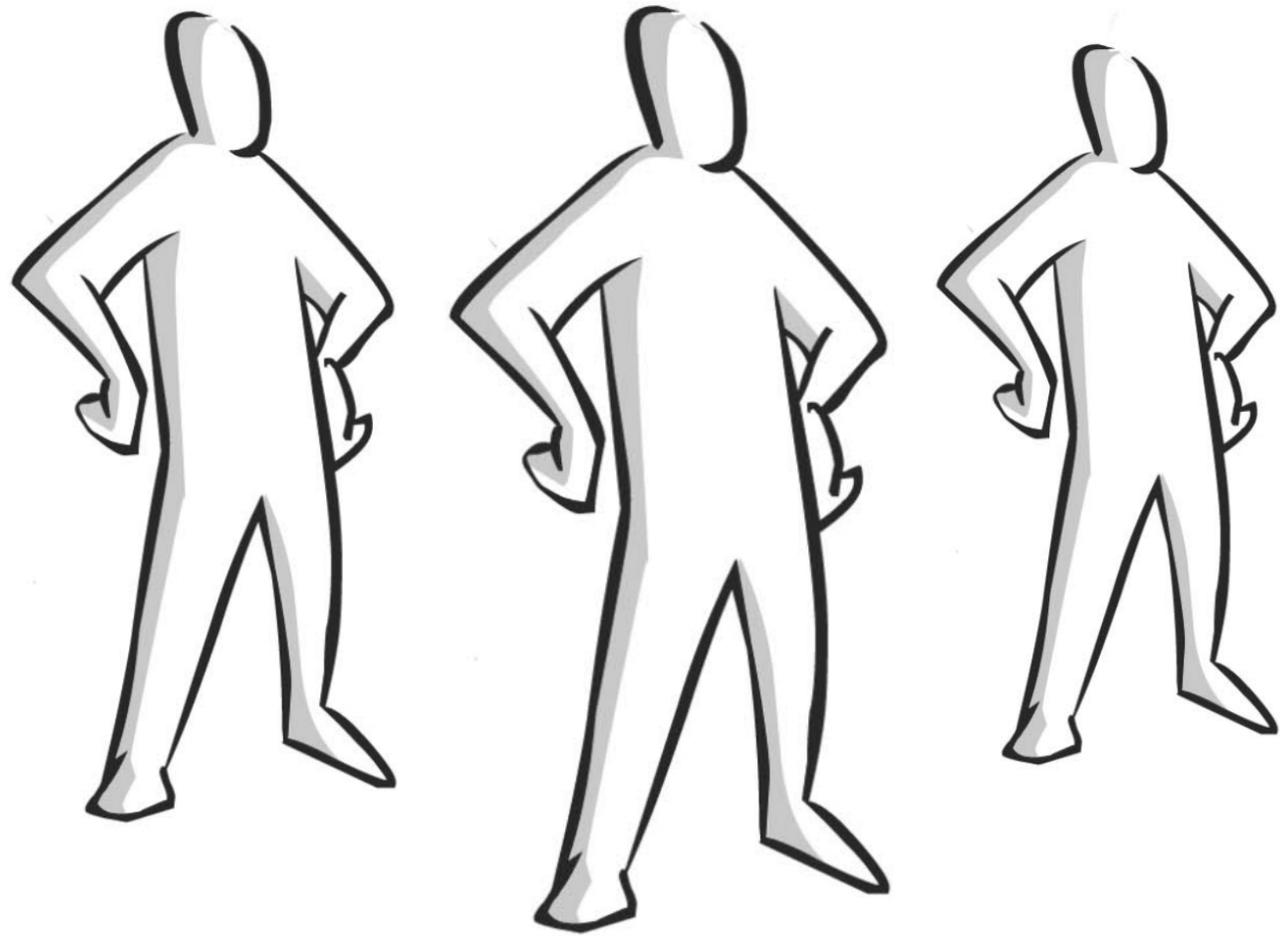
PHASES OF WORK

What are the major stages of value creation?



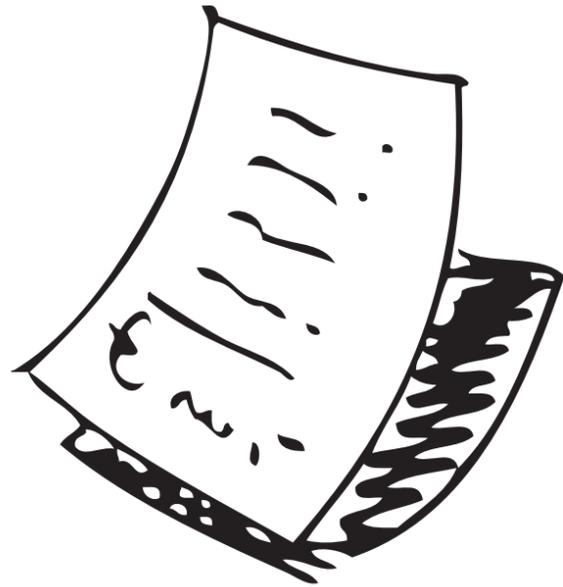
STAKEHOLDERS

Who is involved in making work happen?



OUTPUTS

What are the major deliverables?



TOOLS

What technologies augment value creation?



FRAME03 INDUSTRY LIFECYCLE & WORKFLOW

How is value created in your organization?

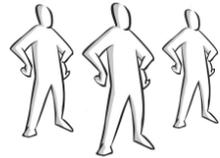
PHASES OF WORK

What are the major stages of value creation?



STAKEHOLDERS

Who is involved in making work happen?



OUTPUTS

What are the major deliverables?



TOOLS

What technologies augment value creation?



















FRAME01 GLOBAL DRIVERS

SOCIETY

Demand in Africa + Asia for 'middle class' lifestyle + opportunities
Global competition
Cost of labour in global economies is highly variable
Top class overtook the world

TECHNOLOGY

UBIQUITOUS ACCESS TO PROCESSING
BIM BAM BOOM

What are the broad forces shaping you?

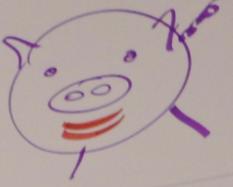
ECONOMY

GLOBALIZATION 3.0
Efficiency Drive

POLICY

Wealth is defined by adaptability of societies of people
there are global drivers

Changes on our sector cannot be denied... to do so is like putting lipstick on a pig



IDEAS THE I

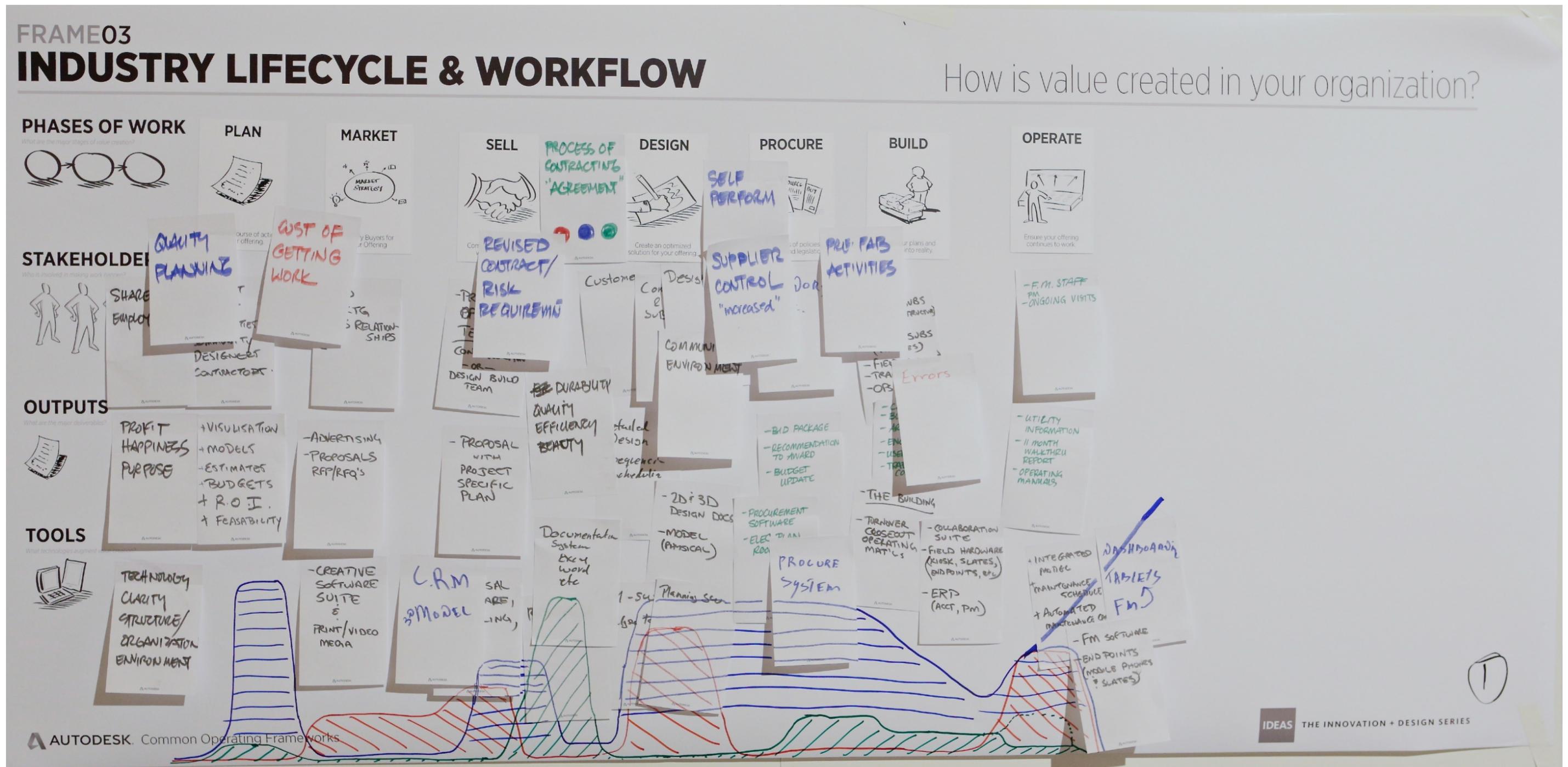
IMPLICATIONS
MEGA CITIES
THREATS TO BUILDING INDUSTRY

NEED FOR RECONNECTING TO REALITY OF BUILDING

Common Operating Frameworks

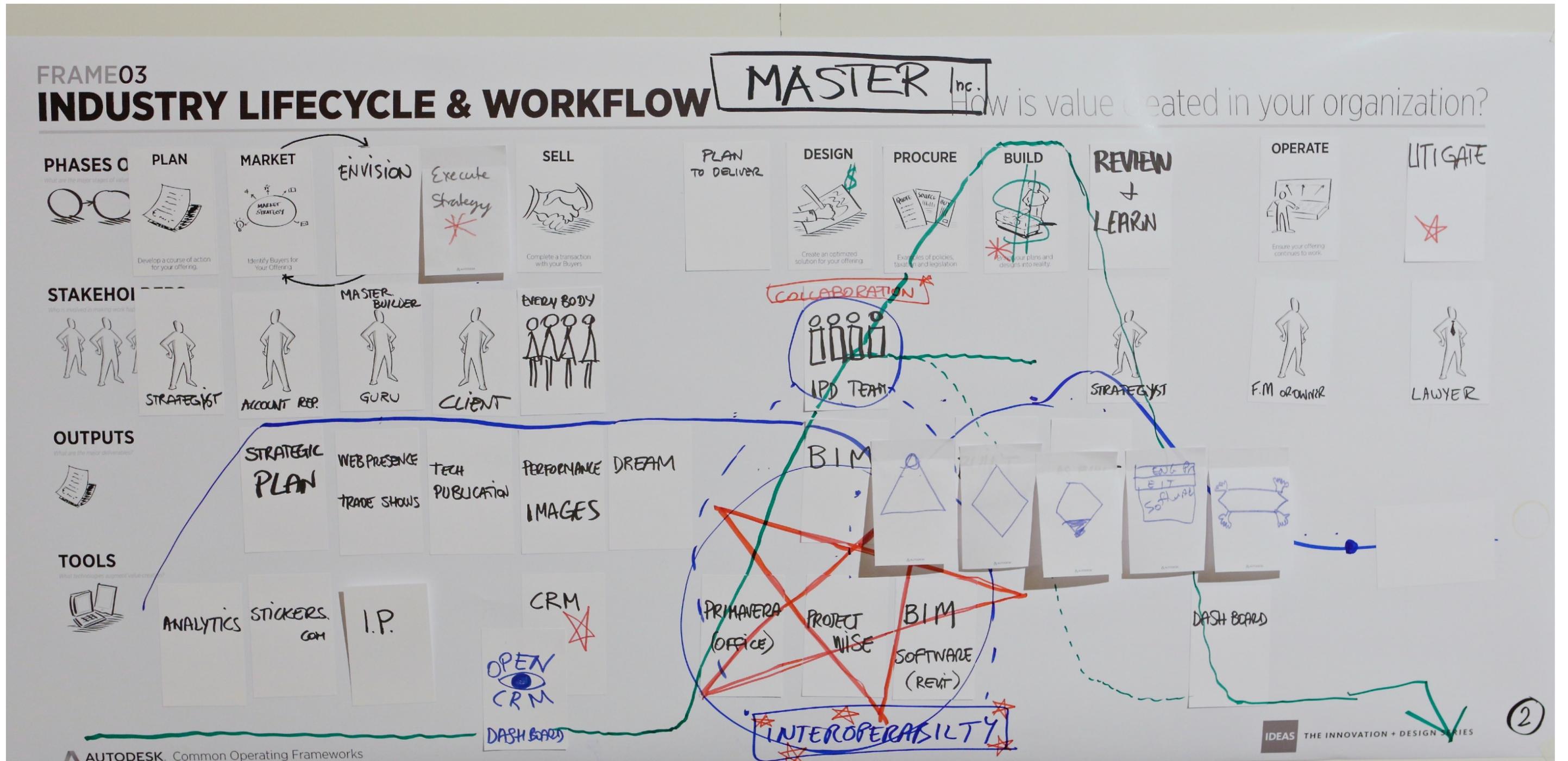
LIFECYCLE WORKFLOW

TEAM ONE:
Architecture, Engineering, Construction



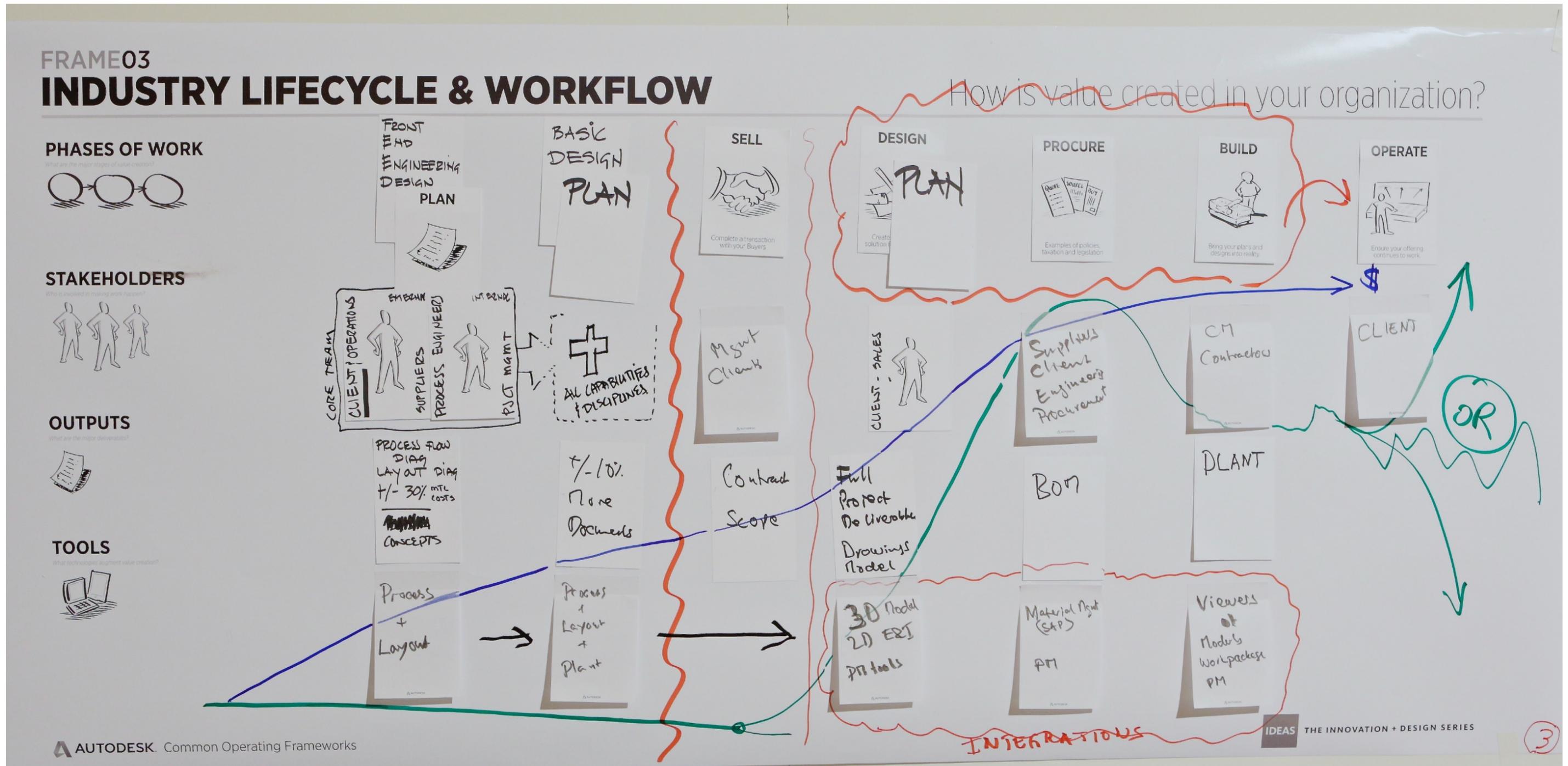
LIFECYCLE WORKFLOW

TEAM TWO:
Architecture, Engineering, Firms



LIFECYCLE WORKFLOW

TEAM THREE:
Built Environment



LIFECYCLE WORKFLOW

TEAM FOUR:
Managing Design & Build

FRAME03

INDUSTRY LIFECYCLE & WORKFLOW

How is value created in your organization?

PHASES OF

What are the major stages of value creation?



MARKET

Identify Buyers for Your Offering



PLAN

Develop a course of action for your offering



SELL

Complete a transaction with your Buyers



DESIGN

Create an optimized solution for your offering



PROCURE

Bring your plans and designs into reality



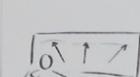
BUILD

Ensure your offering continues to work



OPERATE

Ensure your offering continues to work



MAINTAIN

Ensure your offering continues to work



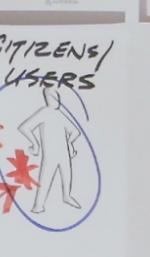
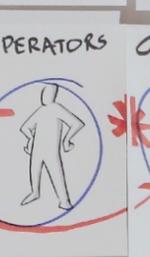
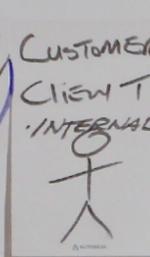
MODIFY IMPROVE

Ensure your offering continues to work



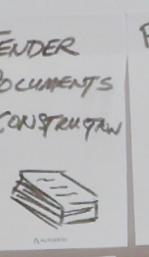
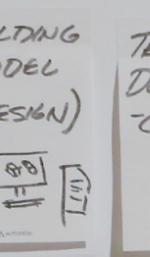
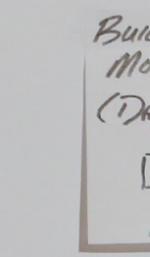
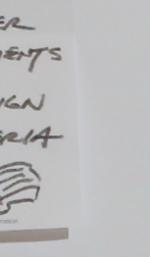
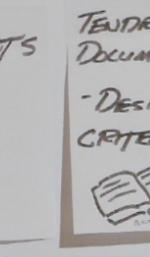
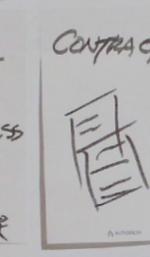
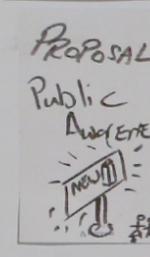
STAKEHOLDERS

Who is involved in making work happen?



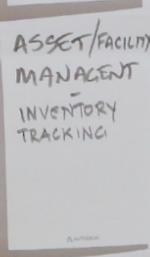
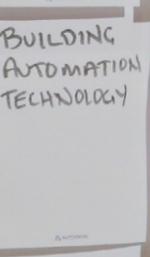
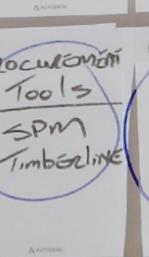
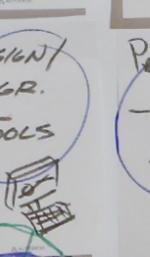
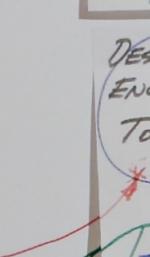
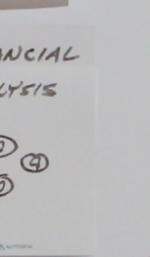
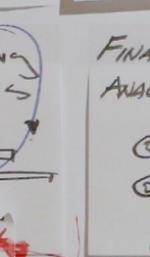
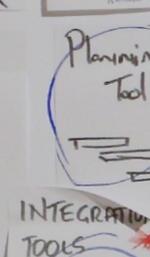
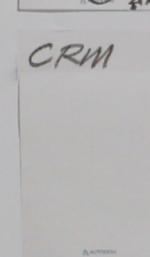
OUTPUTS

What are the major deliverables?



TOOLS

What technologies augment value creation?



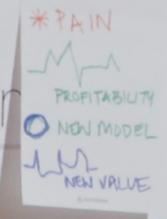
LIFECYCLE WORKFLOW

TEAM FIVE:
Design & Manufacturing

FRAME03

INDUSTRY LIFECYCLE & WORKFLOW

How is value created in your organization?



PHASES OF WORK

What are the major stages of value creation?



MARKET



Identify Buyers for Your Offering

PLAN



Develop a course of action for your offering

PROTOTYPING (OPTIONAL)

SELL



Complete a transaction with your Buyers

DESIGN



Create an optimized solution for your offering

PROCURE



Examples of policies, taxation and legislation

BUILD



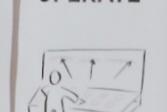
Bring your plans and designs into reality

COLLECTION OF SALE



Ensure your offering continues to work

OPERATE



Ensure your offering continues to work

STAKEHOLDERS

Who is involved in making work happen?



SALES
ENG.
PURCH.
MFG.
SUPPLY CHAIN
FINANCE

ENG.
MFG.
SUPPLY CHAIN
FINANCE
SALES
MKT'NG

ENG/R&D
MFG.
SUPPLY CHAIN

CLIENTS
SALES
FINANCE
ENG.
LEGAL

ENG
MFG.
SUPPLY CHAIN
FINANCE

SUPPLY CHAIN
LOGISTICS
MFG.
ENG.
FINANCE

MFG
ENG
LOGISTICS
SUPPLY CHAIN

SALES
CLIENT
FINANCE

SALES
R&D
ENG

OUTPUTS

What are the major deliverables?



MARKET PLAN
PRODUCT DEF.
FORECAST
FORECAST SELLING PRICE

BUSINESS PLAN
RESOURCE REQU.
MATERIAL, TOOLS,
CAPITAC

TECHNICAL REPORT

CONTRACT
SPECIFICATION
DELIVERY LIST
BUDGET
TERMS & CONDITIONS OF SALE
Business Detail Plan

TECHNICAL DETAILS
BOM
ENG SCHEDULE

NEGOTIATION OF SUPPLY CONTRACT RESULTING IN ECONOMIES OF SCALE = lower prices - delivery schedules

MFG SCHEDULE
BUILD PRODUCT
TEST PRODUCT TO MEET REQ'S
QUALITY TEST
FINALIZE IMPROVEMENTS
CUSTOMER INSPECTION & ACCEPTANCE

INVOICING DONE & CUSTOMER VERIFIES RECEIPT

FINAL ACCEPTANCE BY CLIENT
PERFORMANCE REVIEW of contract & equipment. Fee Back to sales & ENGINE FOR FUTURE IMPROVEMENTS

TOOLS

What technology segment value creation?



MARKET STUDIES
SURVEYS
BI & SIMULATION
CRM

BI & ERP

CAX SIMULATION

CRM
ERP
PRODUCT CONFIGURATION

CAX
PDM
ERP

ERP
PDM

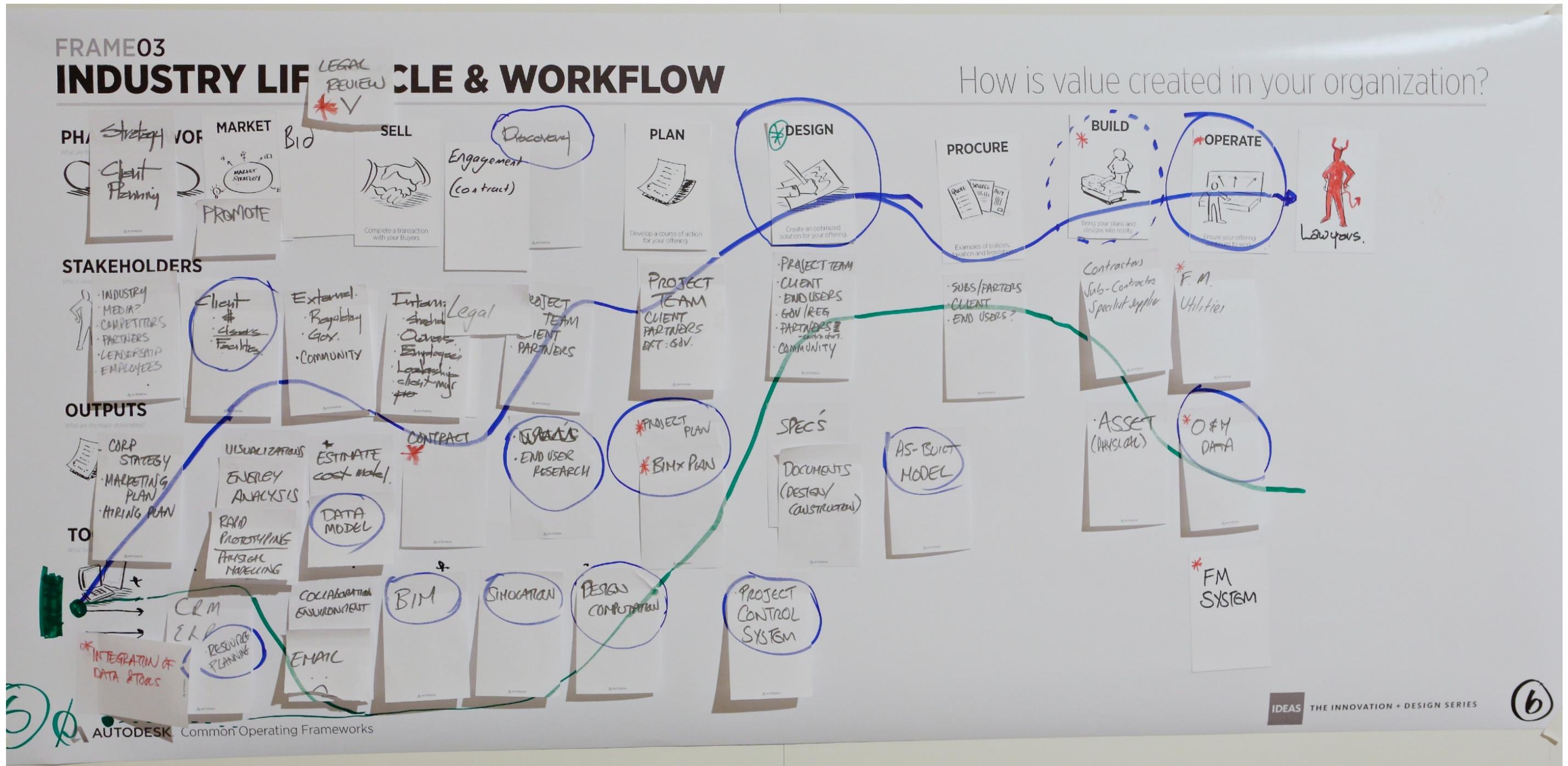
ERP
CAD/M

ERP
CORP. BANKING

ERP
CONTRACT MGMT SYS

LIFECYCLE WORKFLOW

TEAM SIX:
Design & Construction



LIFECYCLE WORKFLOW

TEAM SEVEN:
Entertainment

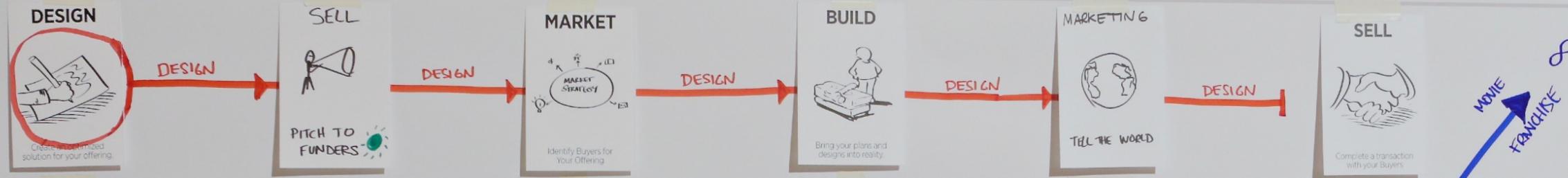
FRAME03

INDUSTRY LIFECYCLE & WORKFLOW

How is value created in your organization?

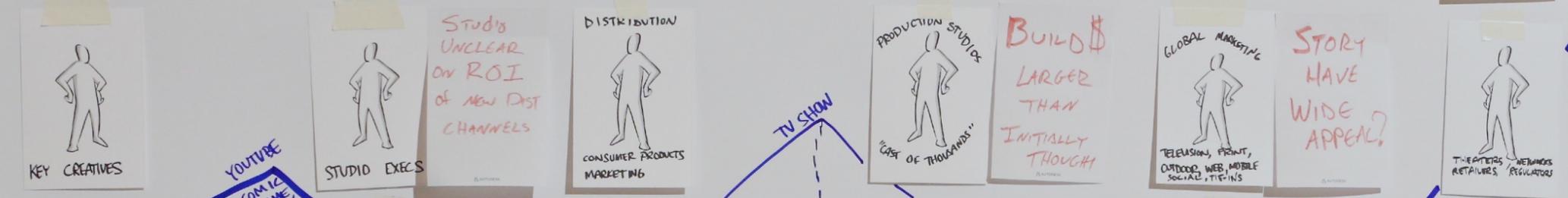
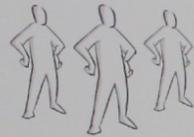
PHASES OF WORK

What are the major stages of value creation?



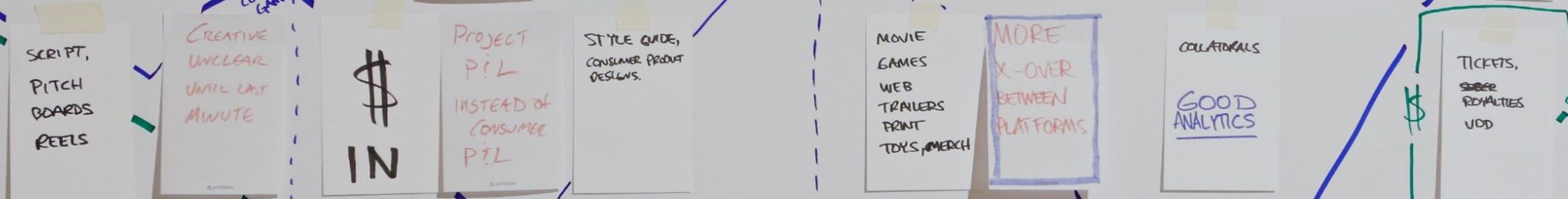
STAKEHOLDERS

Who is involved in making work happen?



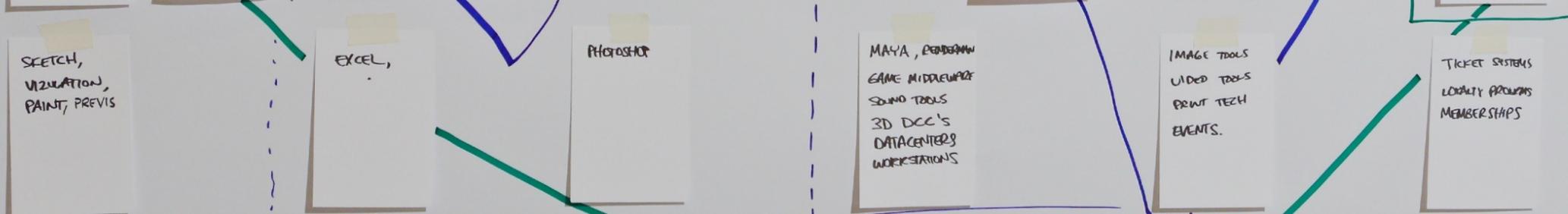
VALUE OUTPUTS

What are the major deliverables?



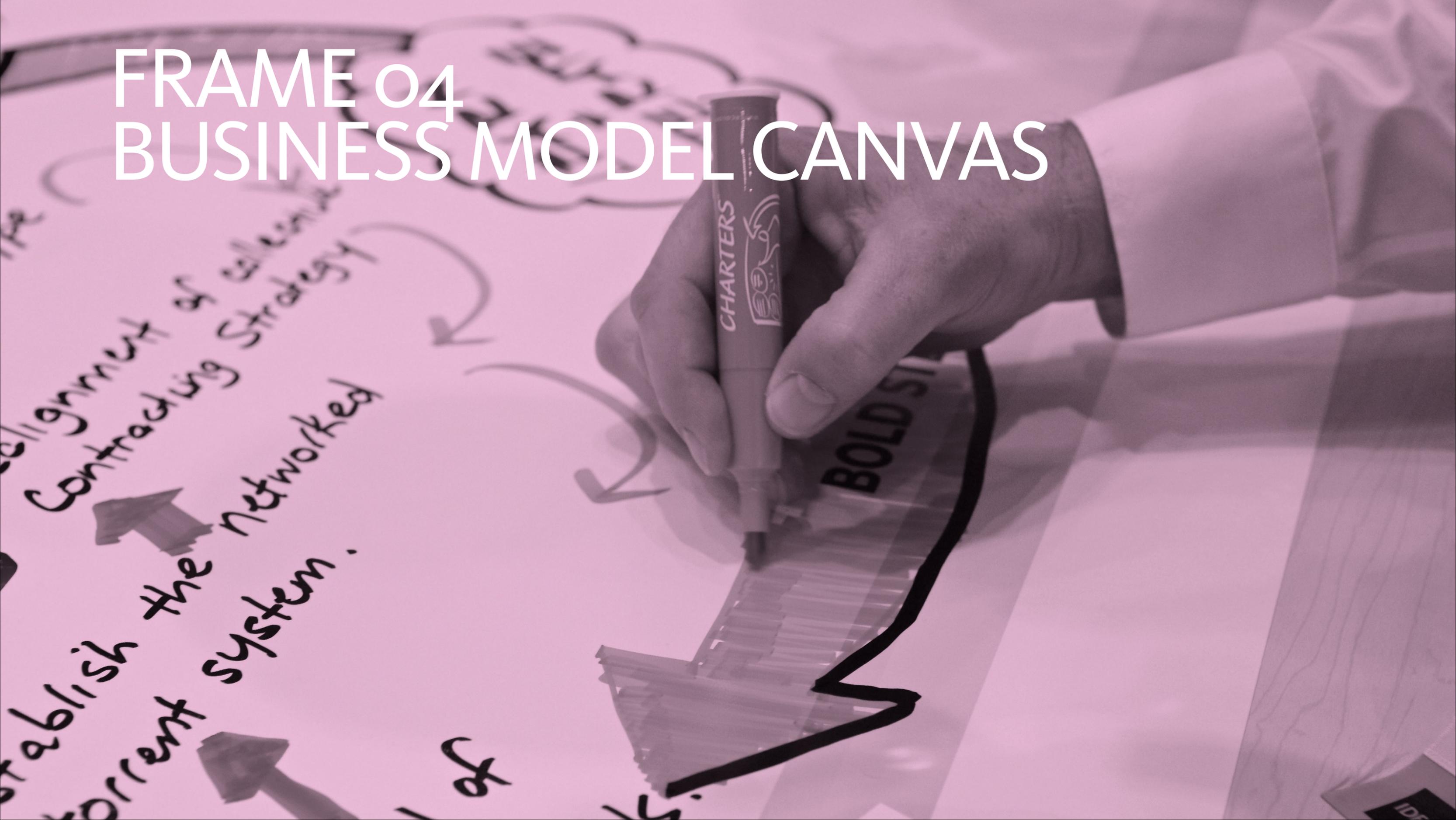
TOOLS

What technologies augment value creation?



7

FRAME 04 BUSINESS MODEL CANVAS



FRAME 04 BUSINESS MODEL CANVAS

Groups took their emerging ideas about places to create more streamlined workflow and plotted the elements of the business on a Canvas with 9 nodes:

- Customer Segments
- Value Propositions
- Customer Relationship
- Channel
- Key Resources
- Key Activities
- Partners
- Revenue Streams
- Cost Structure

FRAME04 BUSINESS MODEL CANVAS

What is the business model of your organization?

Key Partners



Who are your Key Partners?
Who are your key suppliers?
Which Key Activities do partners perform?
Which Key Resources are you acquiring from partners?

MOTIVATIONS FOR PARTNERSHIPS
- Optimization and economy
- Reduction of risk and uncertainty
- Acquisition of particular Resources and activities

Key Activities



What Key Activities do your Value Propositions require?
What Distribution Channels do you use?
How do you manage your Customer Relationships?
How do you create Revenue Streams?

CATEGORIES
- Production
- Platform/Service
- Delivery/Networks

Value Propositions



What value do you deliver to the customer?
Which one of your customer's problems are you helping to solve?
What bundles of products and services are you offering to each Customer Segment?
Which customer needs are you satisfying?

CHARACTERISTICS
- Newness
- Performance
- Customization
- Getting the Job Done
- Design
- Brand/Status
- Cost Reduction
- Risk Reduction
- Accessibility
- Convenience/Usability

Customer Relationships



What type of relationship does each of your Customer Segments expect you to establish and maintain with them?
Which ones have you established?
How are they integrated with the rest of your business model? How costly are they?

EXAMPLES
- Personal assistance
- Dedicated
- Personal Assistance
- Self-Service
- Automated Services
- Communities
- Co-creation

Customer Segments



For whom are you creating value?
Who are your most important customers?
How do customers measure value economically?
How do customers measure value emotionally?

KINDS OF OFFERINGS
- Mass Market
- Niche Market
- Diversified
- Segmented
- Multi-sided Platform

Key Resources



What Key Resources do your Value Propositions require?
What Distribution Channels do you use?
Customer Relationships?
Revenue Streams?

TYPES OF RESOURCES
- Physical
- Intellectual (brand, patents, copyrights, data)
- Human
- Financial

Channels



Through which Channels do your Customer Segments want to be reached?
How are you reaching them now?
How are our Channels integrated? Which ones work best?
Which ones are most cost-efficient?
How are we integrating them with customer routines?

PHASES
- Awareness: How do we raise awareness about our company's offerings?
- Evaluation: How do we help customers evaluate our Value Proposition?
- Purchase: How do we allow customers to purchase specific offerings?
- Delivery: How do we deliver a Value Proposition to customers?
- After-Sales: How do we provide post-purchase customer support?

Cost Structure

What are the most important costs inherent in your business model?
Which Key Resources are most expensive?
Which Key Activities are most expensive?

BUSINESS NATURE
- Cost Driven
- Lowest cost structure
- Low price value proposition
- Maximum automation
- Extensive outsourcing

Value Driven
- Focused on value creation
- Premium value proposition

Fixed Costs
- Salaries, rent, utilities

Variable costs
- Economies of scale
- Economies of scope

Revenue Streams

For what value are your customers really willing to pay?
For what do they currently pay?
How are they currently paying?
How would they prefer to pay?
How much does each Revenue Stream contribute to overall revenues?

TYPES
- Asset sale
- Usage fee
- Subscription Fees
- Licensing
- Brokerage Fees
- Advertising

FIXED PRICING
- List Price
- Product feature dependent
- Customer segment dependent
- Volume dependent

DYNAMIC PRICING
- Negotiation (Bargaining)
- Yield Management
- Real-time Market

Customer Segments

For whom are you creating value?

Who are your most important customers?

How do customers measure value economically?

How do customers measure value emotionally?

KINDS OF OFFERING

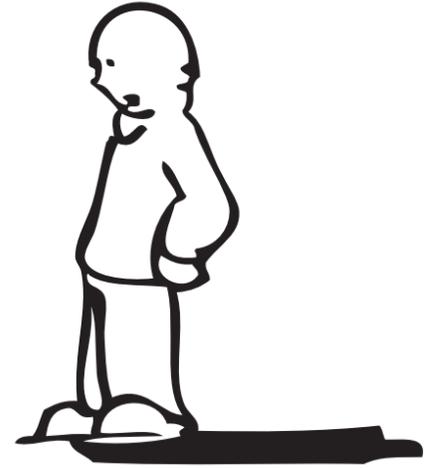
- Mass Market

- Niche Market

- Diversified

- Segmented

- Multi-sided Platform



Value Propositions

What value do you deliver to the customer?

Which one of your customer's problems are you helping to solve?

What bundles of products and services are you offering to each Customer Segment?

Which customer needs are you satisfying?

CHARACTERISTICS

- *Newness*
- *Performance*
- *Customization*
- *Getting the Job Done*
- *Design*
- *Brand/Status*
- *Cost Reduction*
- *Risk Reducti*
- *Accessibility*
- *Convenience/Usability*



Customer Relationships



What type of relationship does each of your Customer Segments expect you to establish and maintain with them?

Which ones have you established?

How are they integrated with the rest of your business model? How costly are they?

EXAMPLES

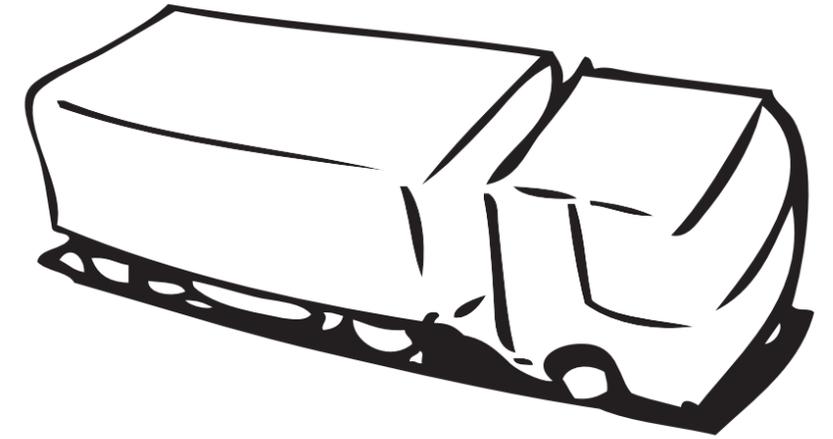
- Personal assistance*
- Dedicated*
- Personal Assistance*
- Self-Service*
- Automated Services*
- Communities*
- Co-creation*

Channels

*Through which Channels do your Customer Segments want to be reached?
How are you reaching them now?
How are our Channels integrated? Which ones work best?
Which ones are most cost-efficient?
How are we integrating them with customer routines?*

PHASES

- Awareness: How do we raise awareness about our company's offerings?*
- Evaluation: How do we help customers evaluate our Value Proposition?*
- Purchase: How do we allow customers to purchase specific offerings?*
- Delivery: How do we deliver a Value Proposition to customers?*
- After Sales: How do we provide post-purchase customer support?*



Revenue Streams

For what value are your customers really willing to pay?

For what do they currently pay?

How are they currently paying?

How would they prefer to pay?

How much does each Revenue Stream contribute to overall revenues?

TYPES

- Asset sale*
- Usage fee*
- Subscription Fees*
- Lending/Renting/Leasing*
- Licensing*
- Brokerage fees*
- Advertising*

FIXED PRICING

- List Price*
- Product feature dependent*
- Customer segment depe*
- Volume dependentndent*

DYNAMIC PRICING

- Negotiation (bargaining)*
- Yield Management*
- Real-time-Market*

Key Activities

*What Key Activities do your Value Propositions
require our Distribution Channels?
How do you manage our Customer Relationships?
How do you create Revenue Streams?*

CATEGORIES

- Production
- Problem Solving
- Platform/Networks



Key Resources

*What Key Resources do your Value Propositions require?
Distribution Channels?
Customer Relationships?
Revenue Streams?*

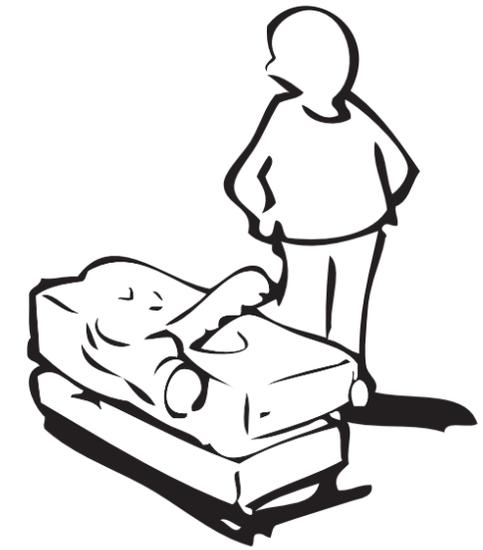
TYPES OF RESOURCES

Physical

*Intellectual (brand patents,
copyrights, data)*

Human

Financial



Key Partners

Who are your Key Partners?

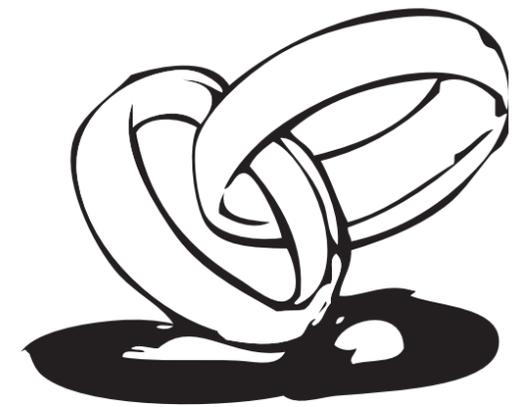
Who are your key suppliers?

Which Key Activities do partners perform?

Which Key Resources are you acquiring from partners?

MOTIVATIONS FOR PARTNERSHIPS

- Optimization and economy*
- Reduction of risk and uncertainty*
- Acquisition of particular*
- Resources and activities*



Cost Structure

What are the most important costs inherent in your business model?

Which Key Resources are most expensive?

Which Key Activities are most expensive?

BUSINESS NATURE

- Cost Driven
- Leanest cost structure,
- Low price value proposition
- Maximum automation
- Extensive outsourcing

Value Driven

- Focused on value creation
- Premium value proposition

Fixed Costs

- Salaries, rents, utilities

Variable costs

- Economies of scale
- Economies of scope

FRAME04 BUSINESS MODEL CANVAS

What is the business model of your organization?

Key Partners



Who are your Key Partners?
Who are your key suppliers?
Which Key Activities do partners perform?
Which Key Resources are you acquiring from partners?

MOTIVATIONS FOR PARTNERSHIPS

- Optimization and economy
- Reduction of risk and uncertainty
- Acquisition of particular Resources and activities

Key Activities



What Key Activities do your Value Propositions require?
What Distribution Channels do you use?
How do you manage your Customer Relationships?
How do you create Revenue Streams?

CATEGORIES

- Production
- Platform/Service
- Network/Networks

Value Propositions



What value do you deliver to the customer?
Which one of your customer's problems are you helping to solve?
What bundles of products and services are you offering to each Customer Segment?
Which customer needs are you satisfying?

CHARACTERISTICS

- Newness
- Performance
- Customization
- Getting the Job Done
- Design
- Brand/Status
- Cost Reduction
- Risk Reduction
- Accessibility
- Convenience/Usability

Customer Relationships



What type of relationship does each of your Customer Segments expect you to establish and maintain with them?
Which ones have you established?
How are they integrated with the rest of your business model? How costly are they?

EXAMPLES

- Personal assistance
- Dedicated
- Personal Assistance
- Self-Service
- Automated Services
- Communities
- Co-creation

Customer Segments



For whom are you creating value?
Who are your most important customers?
How do customers measure value economically?
How do customers measure value emotionally?

KINDS OF OFFERINGS

- Mass Market
- Niche Market
- Diversified
- Segmented
- Multi-sided Platform

Key Resources



What Key Resources do your Value Propositions require?
What Distribution Channels do you use?
Customer Relationships?
Revenue Streams?

TYPES OF RESOURCES

- Physical
- Intellectual (brand, patents, copyrights, data)
- Human
- Financial

Channels



Through which Channels do your Customer Segments want to be reached?
How are you reaching them now?
How are our Channels integrated? Which ones work best?
Which ones are most cost-efficient?
How are we integrating them with customer routines?

PHASES

- Awareness: How do we raise awareness about our company's offerings?
- Evaluation: How do we help customers evaluate our Value Proposition?
- Purchase: How do we allow customers to purchase specific offerings?
- Delivery: How do we deliver a Value Proposition to customers?
- After-Sales: How do we provide post-purchase customer support?

Cost Structure

What are the most important costs inherent in your business model?
Which Key Resources are most expensive?
Which Key Activities are most expensive?

BUSINESS NATURE

- Cost Driven
- Lowest cost structure
- Low price value proposition
- Maximum automation
- Extensive outsourcing

Value Driven

- Focused on value creation
- Premium value proposition

Fixed Costs

- Salaries, rents, utilities

Variable costs

- Economies of scale
- Economies of scope

Revenue Streams

For what value are your customers really willing to pay?
For what do they currently pay?
How are they currently paying?
How would they prefer to pay?
How much does each Revenue Stream contribute to overall revenues?

TYPES

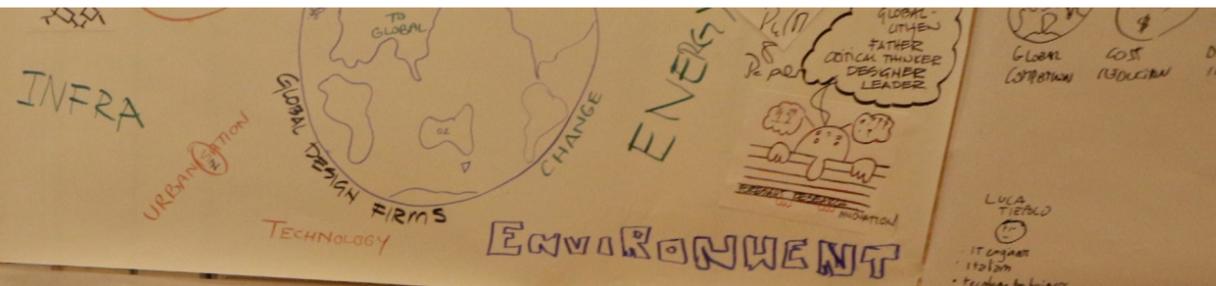
- Asset sale
- Usage fee
- Subscription Fees
- Licensing/Renting/Leasing
- Licensing
- Brokerage Fees
- Advertising

FIXED PRICING

- List Price
- Product feature dependent
- Customer segment dependent
- Volume dependent/dependent

DYNAMIC PRICING

- Negotiation (Bargaining)
- Yield Management
- Real-time Market







FRAME03 INDUSTRY LIFECYCLE

PHASES OF WORK



TAKEHOLDERS



WORKFLOW



DESIGN



Create optimized solution for your offering

PITCH TO FUNDERS

Study UNCLEAR ON ROI

CREATIVE CLEAR















BUSINESS CANVAS

TEAM ONE:

Identify new Concepts for Co-Creation.

FRAME04 BUSINESS MODEL CANVAS

What is the business model of your organization?

Key Partners

- CONTRACTOR
- SUBS
- ARCH
- ENGERS
- MODULAR MFES.
- GAIN TIME ADVANTAGE FROM MFRG. + MODULAR TECHNIQUES
- STRATEGIC PARTNERS AND VALUE
- VENDOR RELATION ON LOW PRICE
- CUSTOMERS
- SUB CONTRACTORS + MODULAR CONTRACTS
- FINANCING (LENDERS) COUNSEL PR

Key Activities

- Quality Plan with Design
- Validation of Design and Plan.
- INTEGRATED WORK FLOW PROCESS
- OPTIMISING TIME.

Value Propositions

- VIRTUALLY VALIDATED SOLUTIONS
- NEW CONCEPTS (CO-CREATING BRAND VALUE (TEAM))
- SMART DESIGN FOCUSED ON INCREASING RETURN ON INVESTMENT.
- ENVIRONMENTALLY RESPONSIBLE/SUSTAINABLE
- SHARED KNOWLEDGE
- DATA BANK OF TIME COST QUALITY DESIGN DETAILS LESSONS LEARNED.
- 30-50% FASTER

Customer Relationships

- TWISTED ADVISOR
- ONGOING OPERATIONS ROLE
- EVALUATED ON MUTUAL PERFORMANCE METRICS

Customer Segments

- WORK FOR THOSE OF OUR OWN CHOOSING
- EVERY ONE WE SHAPE THE WORLD OF TOMORROW

Key Resources

- Virtual representation of Product & Process
- Information DATA BANK
- SHARED KNOWLEDGE VALUE PROPOSITION.
- CREATIVE TALENT

Channels

- REPEAT BUSINESS BY REPUTATION

Cost Structure

- MODEL DESIGNERS
- PROJECT MANAGERS
- IT PLATFORM
- BIL DATA UPFRONT BASED ON MODEL PRIVATE FIN.
- COST OF TALENT
- FOCUS ON VALUE CREATION LONG TERM RELATIONSHIPS

Revenue Streams

- LONG TERM RECURRING ADDED VALUE 2WAY
- PAYING BASED ON AVAILABILITY OBJECT
- FIXED FEE W/ PERFORM INCENTIVE.

AUTODESK Common Operating Frameworks

IDEAS THE INNOVATION + DESIGN SERIES

BUSINESS CANVAS

TEAM TWO:

Create a master apprentice C2C model

FRAME04
BUSINESS MODEL CANVAS

What is the business model of your organization?

Key Partners
Who are your Key Partners?
Who are your key suppliers?
Which Key Activities do partners perform?
Which Key Resources are you acquiring from partners?

SOFTWARE COMPANIES → PARTNER
Low Cost Commodity Service providers

Key Activities
What Key Activities do your Value Propositions require?
Which Customer Channels do you use?
How do you manage your Customer Relationships?
How do you create Revenue Streams?

Design
CREATE VISION & SIMULATE OR TEST
AGGREGATE DATA & ANALYZE
MANAGE & MAINTAIN DATA

Value Propositions
What value do you provide to the customer?
What is the problem you are solving?
What are you offering?
What are you doing differently?
What are you doing better?

MASTER APPRENTICE
ENG. PRINC.
ENG. in TRAINING
INTEGRATED APPROACH
↓ RISK
↑ VALUE
CRADLE TO CRADLE

Customer Relationships
What type of relationship does each of your Customer Segments expect you to establish and manage with them?
Which ones have you established?
How are they interacting with the rest of your business model? How costly are they?

MATRIX C-LEVEL
↓

Customer Segments
For whom are you creating value?
Where are your most important customers?
How do customers measure value economically?
How do customers measure value emotionally?

IMPROVED OUTCOME FOR END USERS
SOPHISTICATED OWNERS

Key Resources
What Key Resources do your Value Propositions require?
Which Customer Channels do you use?
Customer Relationships?
Revenue Streams?

CONSTRUCTORS
EXPERIENCED DOMAIN KNOWLEDGE
Decision making & Vision
STRATEGY
HUMAN PARALLEL PROCESSING
UTILIZED PARALLEL
TECH + 20Y EXPERIENCE
MULTIPLE PARTIES
DATA CONTINUITY

Channels
Through which Channels do your Customer Segments want to be reached?
How are you reaching them now?
How are our Channels integrated? Which ones work best?
Which ones are most cost-efficient?
How are we integrating them with customer routines?

PANEL CONTRACTS
IDIQ FRAMEWORK
Relationship to Relationship DATA
understand owner's metrics (Business)

Cost Structure
What are the most important costs inherent in your business model?
Which Key Resources are most expensive?
Which Key Activities are most expensive?

PREMIUM VALUE CREATION
- ECONOMIES OF SCOPE + SCALE

Revenue Streams
For what value are your customers really willing to pay?
For what do they currently pay?
How are they currently paying?
How would they prefer to pay?
How much does each Revenue Stream contribute to overall revenue?

FROM DESIGN SEL TO INSIGHT
BUSINESS CONSULTING
- END USER
EASIER THAN TRANSACTIONAL
STRATEGIC PLANNING
DESIGN
MAINTAIN DATA

AUTODESK. Common Operating Frameworks
www.businessmodelgeneration.com
IDEAS THE INNOVATION + DESIGN SERIES
2

BUSINESS CANVAS

TEAM THREE:
Restructuring risk through integrated data.

FRAME04 BUSINESS MODEL CANVAS

What is the business model of ^{NEW} your organization?

Key Partners
Who are your Key Partners?
Who are your key suppliers?
Which Key Activities do partners perform?
Which Key Resources are you acquiring from partners?

Key Activities
What Key Activities do your Value Propositions require?
Which Distribution Channels do you use?
How do you manage your Customer Relationships?
How do you create Revenue Streams?

Value Propositions
What value do you deliver to the customer?
Which one of your customer's problems are you helping to solve?
What bundles of products and services are you offering to each Customer Segment?
Which customer needs are you satisfying?

Customer Relationships
What type of relationship does each of your Customer Segments expect you to establish and maintain with them?
Which ones have you established?
How are they integrated with the rest of your business model? How costly are they?

Customer Segments
For whom are you creating value?
Who are your most important customers?
How do customers measure value propositionally?
How do customers measure value economically?

Key Resources
What Key Resources do your Value Propositions require?
Which Distribution Channels do you use?
Customer Relationships?
Revenue Streams?

Channels
Through which Channels do your Customer Segments want to be reached?
How are you reaching them now?
How are our Channels integrated?
Which ones are most cost effective?
How are we integrating them into our business model?

Cost Structure
What are the most important costs inherent in your business model?
Which Key Resources are most expensive?
Which Key Activities are most expensive?

Revenue Streams
For what value are your customers really willing to pay?
For what do they currently pay?
How would they prefer to pay?
How much does each Revenue Stream contribute to overall revenues?

Handwritten Notes:

- Key Partners:** Support Svcs - Cloud; Maybe Same partners but emphasis changes; Hi tech Hi Value
- Key Activities:** Workflow mapping (consistency)
- Value Propositions:** Consolidate Integrated Validated Consistent
- Customer Relationships:** RISK RESTRUCTURED
- Customer Segments:** TORRENT TEAM
- Key Resources:** CLOUD TOOLS THAT FLOAT IN THE CLOUD; PREDICTABILITY TIME TO MARKET; BETTER CLIENT MANAGEMENT RESPONSE
- Cost Structure:** Value expectation through entire value chain; Variable Cost model reduced o/h by using 'fairm'; Effort + O/H drives operating Struet + stcl workflow; Cost over-run Captured Where incurred
- Revenue Streams:** PROPORTIONAL REWARD DISTRIBUTION

Logos: AUTODESK. Common Operating Frameworks; G10 CONSULT; IDEAS THE INNOVATION + DESIGN SERIES; 3

BUSINESS CANVAS

TEAM FOUR:
Focus on ultimate Customer Satisfaction.

FRAME04 BUSINESS MODEL CANVAS

What is the business model of your organization?

Key Partners

Who are your Key Partners?
Who are your key suppliers?
Which Key Activities do partners perform?
Which Key Resources are you acquiring from partners?

- DEVELOPER
 - PROJECT INTEGRATION
 - FINANCE
 - DESIGN
 - BUILDERS
 - OWNERS
- CLIENT/
CUSTOMERS



Key Activities

What Key Activities do your Value Propositions require?
What distribution Channels?
How do you manage your Customer Relationships?
How do you create Revenue Streams?

REQUIREMENT
DEFINITION
MEETINGS
&
DOCUMENTATION

Recognize subtle
functional
evolution to require
to changes needs
Iterative design

Value Propositions

What value do you deliver to the customer?
Which one of your customer's problems are you helping to solve?
What bundles of products and services are you offering to each Customer Segment?
Which customer needs do you address?

Ultimate, cust.
satisfaction.

- Better product
- Higher quality
- Lower op. cost
- Lower cost cost
- On-time delivery



Customer Relationships

What type of relationship does each of your Customer Segments expect you to establish and maintain with them?
Which ones have you established?
How are they integrated with the rest of your business model? How costly are they?

Integrated exp.
Better/efficient
Communs.
Customer feedback
Mechanism.
Response.

Customer/Client

- retention
- loyalty
- satisfaction
- trust



Customer Segments

For whom are you creating value?
Who are your most important customers?
How do customers measure value economically?
How do customers measure value emotionally?

Most important

- END USERS #1
- OWNERS/ #2 OPERATORS
- INVESTORS #3

Value for

- OWNERS
- OPERATORS
- USERS
- INVESTORS



Key Resources

What Key Resources do your Value Propositions require?
What distribution Channels?
Customer Relationships?
Revenue Streams?

ENGINEERING
INTEGRATION
TEAM

Data + Doc
Management
TEAM

GIS
TEAM

FEASIBILITY
EMERIT
\$ ON
Project
Attr. butea

PROJECT
CONTROLS
TEAM

PROCUREMENT
TEAM

EARLIER
AND MORE
COMPREHENSIVE
PROTECT
INTEGRATION

∴ SAVE TIME
MONEY
∴ BETTER QUALITY
+ LESS WASTE/CONFLICT

Channels

Through which Channels do your Customer Segments want to be reached?
How are you reaching them now?
How are your Channels integrated? Which ones work best?
Which ones are most cost-efficient?
How are we integrating them with customer business?



How do we reach them?

- Public mtg.
- Local news/media
- web
- Social media

Measure value

- Cost of product
- tax rate %/-
- quality of product
- sustainability

Emo value

- impact
- satis' faction (gut feel)
- perception
- reputation
- +

Cost Structure

What are the most important costs inherent in your business model?
Which Key Resources are most expensive?
Which Key Activities are most expensive?

INTEGRATION
SPECIALISTS

SYSTEMS
DEVELOPMENT

INTEGRATION
MANAGER



Revenue Streams

For what value are your customers really willing to pay?
For what do they currently pay?
How would they prefer to pay?
How much does each Customer Segment pay? (Price sensitivity to overall demand?)

Integrated
Model

Training of Staff
(course)

Risk management
+ reduction

Customer
loyalty



BUSINESS CANVAS

TEAM FIVE:
Share risk of design and operations.

FRAME04

BUSINESS MODEL CANVAS

What is the business model of your organization?

Key Partners

Who are your Key Partners?
Who are your key suppliers?
Which Key Activities do partners perform?
Which Key Resources are you acquiring from partners?

CLIENTS
SALES
ENGIN
R&D
MFG
SUPPLIERS

New
Maintenance
support
partners

- availability
at customer
site (global)

Key Activities

What Key Activities do your Value Propositions require?
What Distribution Channels?
How do you manage your Customer Relationships?
How do you create Revenue Streams?

ONGOING
MAINTENANCE
CONTRACTS

UPGRADES TO
EXISTING
INSTALLATIONS

NEW PRODUCT
SALES

- Key Partners

Key Resources

What Key Resources do your Value Propositions require?
What Distribution Channels?
Customer Relationships?
Revenue Streams?

GLOBAL
STANDARDS
FOR
DESIGN
MANUFACTURING
SERVICE

SALES → CLIENT
ENGINEERING
EXPERTISE

TECHNOLOGY
INNOVATION
R&D

CAPITAL
INVESTMENTS

Value Propositions

What value do you deliver to the customer?
Which one of your customer's problems are you helping to solve?
What bundle of products and services are you offering to each Customer Segment?
Which customer needs are you satisfying?

SHARE THE
RISK OF
DESIGN &
OPERATIONS

CUSTOMIZATION
INCOME "EUSO
PRODUCT"

RELIABILITY
SUSTAINABILITY
QUALITY

ENGINEERING
EXPERTISE

AUTOMATION
EXPERTISE

CUSTOMER
FLEXIBILITY

SPEED OF
DELIVERY

TIME TO
MARKET
FOR NICHE
PRODUCT
SPECIFIC TO
CLIENT

GLOBAL
SERVICES

LOCAL
ASSISTANCE

Customer Relationships

What type of relationships does each of your Customer Segments expect you to establish and maintain with them?
Which ones have you established?
How are they integrated with the rest of your business model? How costly are they?

SERVICES X
PLANT
OPTIMIZATION

KEEPING THEM
AWARE OF
NEW TECHNOLOGIES
& BETTER PERFORMANCE
OPTIONS

OPERATIONS ELF SEPARATE
OR SPAN
ACROSS

CHANNELS

THROUGH WHICH CHANNELS DO YOUR CUSTOMER SEGMENTS WANT TO BE REACHED?
How are they reaching them now?
How are our Channels integrated? Which ones work best?
Which ones are most cost-efficient?
How are we integrating them with customer routines?

ATB
THROUGH
SERVICE

DIRECT
SALES TO
CLIENT
PROCUREMENT

Direct
contact

Customer Segments

For whom are you creating value?
Who are your most important customers?
How do customers measure value economically?
How do customers measure value emotionally?

Customer
needs
reliability
for his
business

Sell
h of service
of machinery
& economic
value of
customer

MEASURE VALUE
ON ROI
+
HAPPINESS OF
THEIR OPERATOR.

THEIR CLIENTS
HAPPY WITH PRODUCT

No emergency
calls
by customer

NICHE
TARGET

Cost Structure

What are the most important costs inherent in your business model?
Which Key Resources are most expensive?
Which Key Activities are most expensive?

MATERIAL RICH.
DESIGN HOURS
MFG HOURS

STANDARDIZATION
MFG FLEXIBILITY

VALUE
CREATION

STD. COMPONENTS
ASSEMBLED INTO
A VARIETY OF
PRODUCTS.

Revenue Streams

For what value are your customers really willing to pay?
For what do they currently pay?
How are they currently paying?
How would they prefer to pay?
How much does each Revenue Stream contribute to overall revenues?

PREVENTATIVE
MAINTENANCE
CONTRACTS

high revenue
for reliable
service of
machinery

today
just invest
of equipment
NO service

today
pay / month

future
pay / year

SUSTAINABLE
PRODUCTS

MACHINE
UPGRADES
WITH NEW
TECHNOLOGIES

BUSINESS CANVAS

TEAM SIX:

Build, own, lead and manage data model.

FRAME04
BUSINESS MODEL CANVAS

What is the business model of your organization?

Key Partners
Who are your Key Partners?
Who are your Key Suppliers?
Which Key Activities do partners perform?
Which Key Resources are you acquiring from partners?

Client
Client key stakeholders
Billboards
ACADEMIA / RESEARCH

Key Activities
What Key Activities do your Value Propositions require?
What Distribution Channels?
How do you manage your Customer Relationships?
How do you create Revenue Streams?

ANALYTICS
INFORMATION MANAGEMENT
BIG DATA
Upskill designers in how to build & build on the value of design
FACILITATE THE RELATIONSHIPS BETWEEN ALL PARTNERS/ STAKEHOLDERS

Key Resources
What Key Resources do your Value Propositions require?
Distribution Channels?
Customer Relationships?
Revenue Streams?

EXPERT CONSULTANTS
INTEGRATED RESOURCE PLANNING
PROJECT CONTROL SYSTEM
BIM Managers

Value Propositions
What value do you deliver to the customer?
Which one of your customer's problems are you helping to solve?
What bundles of products and services are you offering to each Customer?
Which customer needs are you satisfying?

DEEP UNDERSTANDING OF CLIENTS BUSINESS & PROBLEMS
UNIQUE DESIGN INTELLIGENCE & EXPERIENCE (MARKET)
BUILD, OWN, LEAD & MANAGE DATA MODEL
CASE STUDIES & METRICS THAT PROVE YOUR DESIGN
RISK MITIGATION
PIECE OF MIND (CONFIDENCE)
COST CONTROLS (EFFICIENCY)
"YOU WILL HAVE NO RISK" (RISK OWNERSHIP)
INNOVATION
AGILITY
ALTERNATIVE SUPPLY PROPOSITIONS
FUTURE-PROOFING BUILDINGS & INFRASTR. (CERTAINTY)
UNDERSTANDING THE CLIENT'S CUSTOMER

Customer Relationships
What type of relationship does each of your Customer Segments expect you to establish and maintain with them?
Which ones have you established?
How are they integrated with the rest of your business model? How costly are they?

TRUST
REAL TIME INFO & CONFIDENCE

Channels
Through which Channels do your Customer Segments want to be reached?
How are you reaching them now?
How are our Channels integrated? Which ones work best?
Which ones are most cost-efficient?
How are we integrating them with customer touchpoints?

BUILD ON TRUSTED PARTNERSHIPS REACH-OUT
CALL CLIENTS AND GO TO THEM (IN THEIR LANGUAGE?)
CLIENT NETWORKS & ORGS

Customer Segments
For whom are you creating value?
Who are your most important customers?
How do customers measure value (satisfaction)?
How do customers measure value (monetarily)?
How do customers measure value (emotionally)?

CLIENTS BUSINESS
MULTI-NICHE BUSINESS
OWNER OPERATORS
END TO END 1-STOP SERVICE
LONG TERM PROJECT COSTS?
SHORT TERM? ENERGY COSTS?

Cost Structure
What are the most important costs inherent to your business model?
Which Key Resources are most expensive?
Which Key Activities are most expensive?

Maximize use of low cost resource - OUTSOURCING
OPTIMIZED BACK-OFFICE - CENTRALIZED - SSC'S
INDUSTRY Standard Contracts.
SMART LEARNING ENVIRONMENTS (SYSTEM)
CLIENT BUSINESS DATA

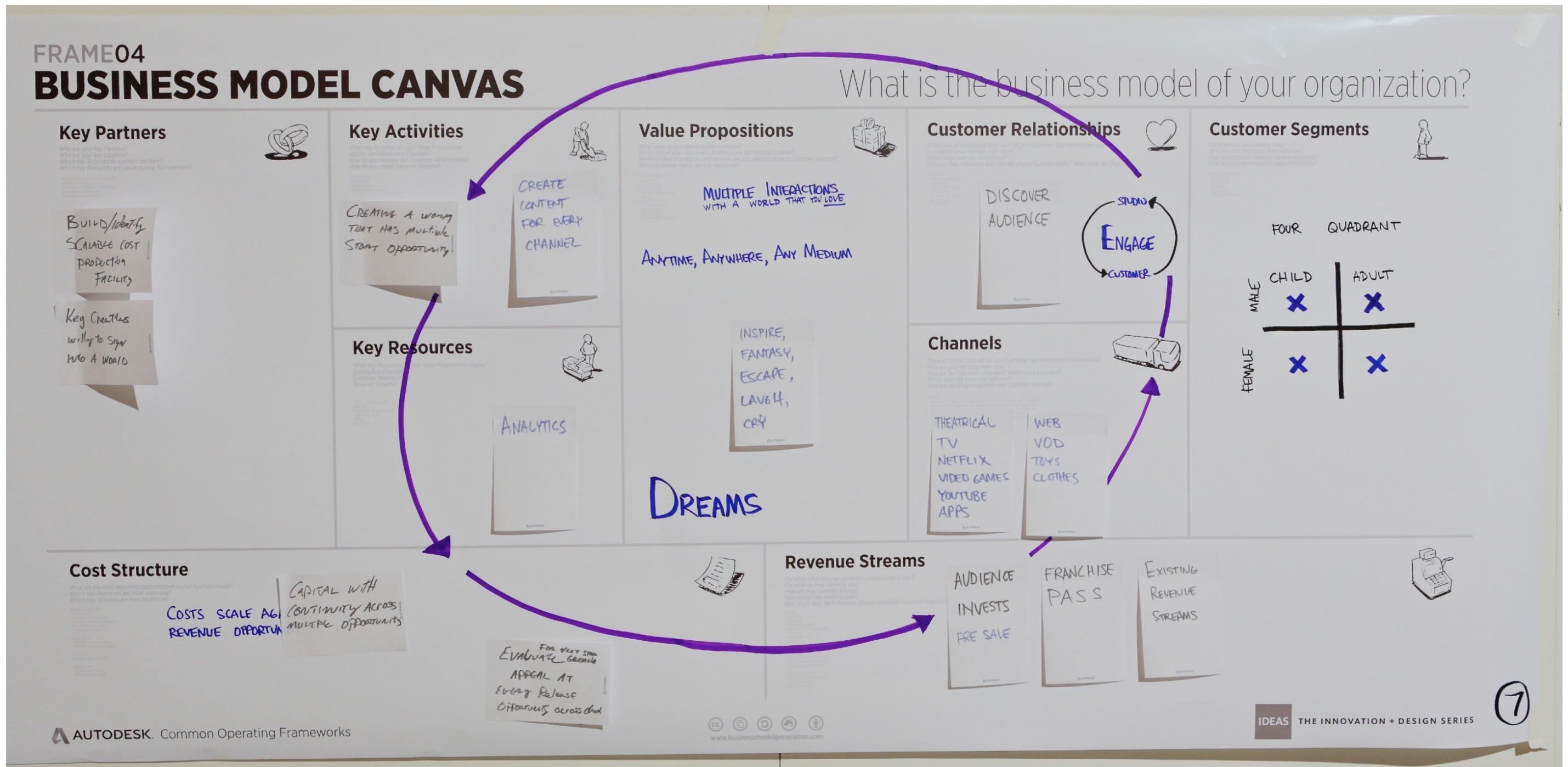
Revenue Streams
What are your customers really willing to pay?
Do they currently pay?
If they currently pay, do they prefer to pay?
If not, what do they prefer to pay?
If not, what do they prefer to pay?
If not, what do they prefer to pay?

SELL "OPERATE" SERVICES
SELL USER RESEARCH TO OTHER PARTNERS
LICENSE DATA & MODEL
ONE STOP SHOP

AUTODESK
www.businessmodelgeneration.com
IDEAS THE INNOVATION + DESIGN SERIES
b

BUSINESS CANVAS

TEAM SEVEN:
Create an integrated prototyping system.



FRAME 05 BOLD STEPS

What are the broad forces shaping your industry?

ENVIRONMENT

- DESIRE TO MAKE A STATEMENT (PERSONAL & CORPORATE) ABOUT POSITION ON ENVIRONMENT
- ENVIRONMENTAL PRESERVATION IS STILL AN OPTION VERSUS NECESSITY
- opportunity to redefine how we design + build components & assemblies vs. bricks + sticks
- ALWAYS CONNECTED
- CO2 ENERGY DELIVERING INSTANTLY
- Awareness to firmness of global economy is growing!

ECONOMY

- RISK BEING PUSHED TO CONTRACTORS DISTORTION B/W RISK & REWARD
- MARGIN PRESSURE - harder to make A RETURN.
- Buyer's Market" - increased commoditization
- Reduced funding for government (Fed, State, ...) projects
- uncertainty in private funding

POLICY

- Integrated thinking is required for success
- Awareness of legal requirements in the synthetic or virtual world
- policy making has become stratified - non-production "collaboration" is losing!
- DATA OWNERSHIP & SECURITY GLOBALLY HEAVILY REGULATED & VERY COMPLEX
- ACA IMPACT ON HEALTHCARE PROVIDERS: HOW THEY DELIVER SERVICES

SOCIETY

- digital HUMAN INTERACTION - ONLINE GAMING - TEXTING
- Connectivity through social media
- INCREASING COMMITMENT TO WORK!
- Society is becoming more pluralistic!
- INFORMATION management is key to successful business value
- Technology enabling us underpinning of dialog / communication
- Age where any time Access to information
- environment
- Urbane TIC
- Environment
- Information management is key to successful business value
- Technology enabling us underpinning of dialog / communication
- Age where any time Access to information
- environment
- Urbane TIC
- Environment

SOCIETY

- digital HUMAN INTERACTION - ONLINE GAMING - TEXTING
- Connectivity through social media
- INCREASING COMMITMENT TO WORK!
- Society is becoming more pluralistic!
- INFORMATION management is key to successful business value
- Technology enabling us underpinning of dialog / communication
- Age where any time Access to information
- environment
- Urbane TIC
- Environment

FRAME05 BOLD STEPS

FLIP'D

What must your organization do to grow and thrive?

FOR our new and returning customers	WHO need to reduce costs and project schedules while ensuring low TCO and CO2 footprint	THE Name of your bold step initiative Use it's catchy and memorable name	IS A a next gen Design & Build Company	THAT Design & Build 30% Faster	UNLIKE YOU!	WE ESTABLISH MUTUAL PERFORMANCE METRICS + GENERATE PROOF	COST SAVINGS CERTAINTY	ENHANCED ROI
---	---	---	--	--	------------------------------	--	-------------------------------	---------------------

DESIGN & BUILD 30% FASTER

INFRASTRUCTURE THAT DEMANDS MUTUAL TRUST
Full COLLABORATION

REDEFINE ROLES & PROCESS

REDEFINE RISK / REWARD (INCENTIVES)

PERFORMANCE CRITERIA DEFINED UPFRONT

AGREEMENT TO LIMIT CHANGE & MAKE RAPID DECISION

TECHNOLOGY PLATFORM TO ENABLE THE NEW PROCESS

OPEN TO CROSS-PLATFORM INTEGRATION

REDEFINE IPD

DEFINE VALUE PROP. FOR ALT. CONTRACTING FORM

IMPROVE SUPPLY CHAIN MANAGEMENT

- DESIGN
- MATERIALS
- EXECUTION
- MANAGEMENT

BOLD STEPS



FOR

- SOPHISTICATED OWNER USERS
- OPERATIONAL DRIVEN DESIGN.
- BUILDER
- SOFTWARE TECHNOLOG

FOR

- SOME OPERATION
- ENT.

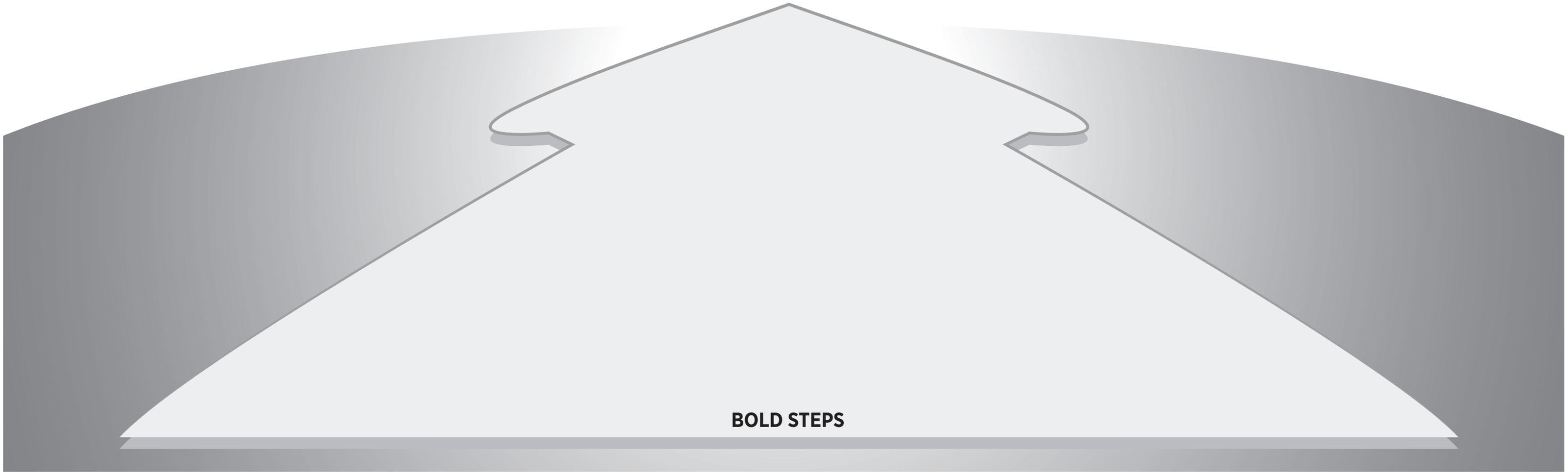
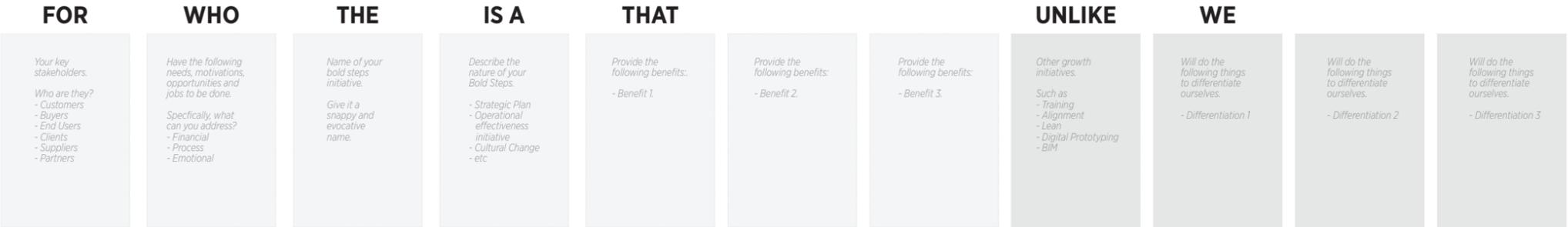
FRAME 05 BOLD STEPS

Each team developed a vision for a new organization that would thrive in the new economy, identifying

- WHO it would serve
- WHAT problems it would solve
- HOW it would solve the problems
- WHY it was important
- WHERE it would differentiate itself

FRAME05
BOLD STEPS

What must your organization do to grow and thrive?



FOR

Your key stakeholders.

Who are they?

- Customers
- Buyers
- End Users
- Clients
- Suppliers
- Partners

WHO

Have the following needs, motivations, opportunities and jobs to be done.

Specifically, what can you address?

- Financial
- Process
- Emotional

FOR

Your key stakeholders.

Who are they?

- Customers
- Buyers
- End Users
- Clients
- Suppliers
- Partners

WHO

Have the following needs, motivations, opportunities and jobs to be done.

Specifically, what can you address?

- Financial
- Process
- Emotional

THE

Name of your bold steps initiative.

Give it a snappy and evocative name.

IS A

Describe the nature of your Bold Steps.

- Strategic Plan
- Operational effectiveness initiative
- Cultural Change
- etc

IS A

THAT

Describe the nature of your Bold Steps.

- Strategic Plan
- Operational effectiveness initiative
- Cultural Change
- etc

Provide the following benefits:.

- Benefit 1.

Provide the following benefits:

- Benefit 2.

Provide the following benefits:

- Benefit 3.

UNLIKE

Other growth initiatives.

Such as

- Training*
- Alignment*
- Lean*
- Digital Prototyping*
- BIM*

WE

Will do the following things to differentiate ourselves.

- Differentiation 1*

Will do the following things to differentiate ourselves.

- Differentiation 2*

Will do the following things to differentiate ourselves.

- Differentiation 3*

FOR

Your key stakeholders.

Who are they?

- Customers
- Buyers
- End Users
- Clients
- Suppliers
- Partners

WHO

Have the following needs, motivations, opportunities and jobs to be done.

Specifically, what can you address?

- Financial
- Process
- Emotional

THE

Name of your bold steps initiative.

Give it a snappy and evocative name.

IS A

Describe the nature of your Bold Steps.

- Strategic Plan
- Operational effectiveness initiative
- Cultural Change
- etc

THAT

Provide the following benefits:.

- Benefit 1.

Provide the following benefits:

- Benefit 2.

Provide the following benefits:

- Benefit 3.

UNLIKE

Other growth initiatives.

- Training
- Alignment
- Lean
- Digital Prototyping
- BIM

WE

Will do the following things to differentiate ourselves.

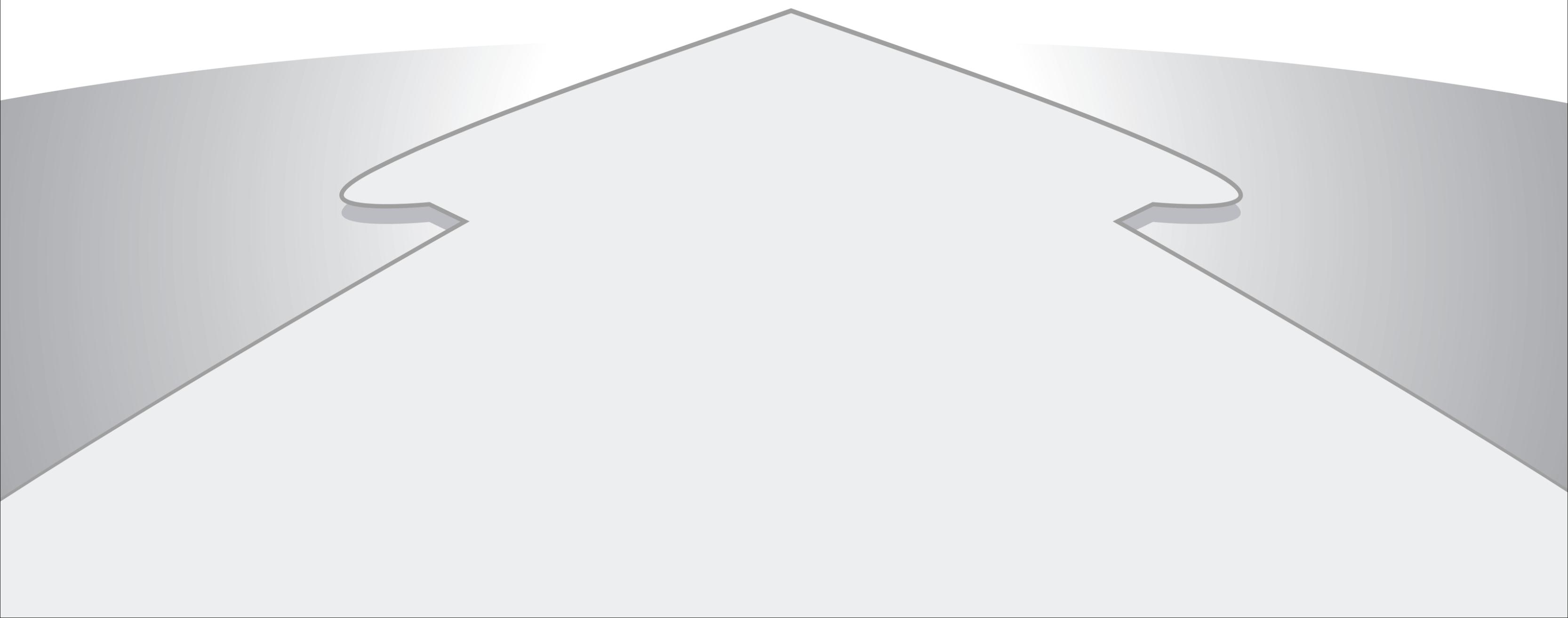
- Differentiation 1

Will do the following things to differentiate ourselves.

- Differentiation 2

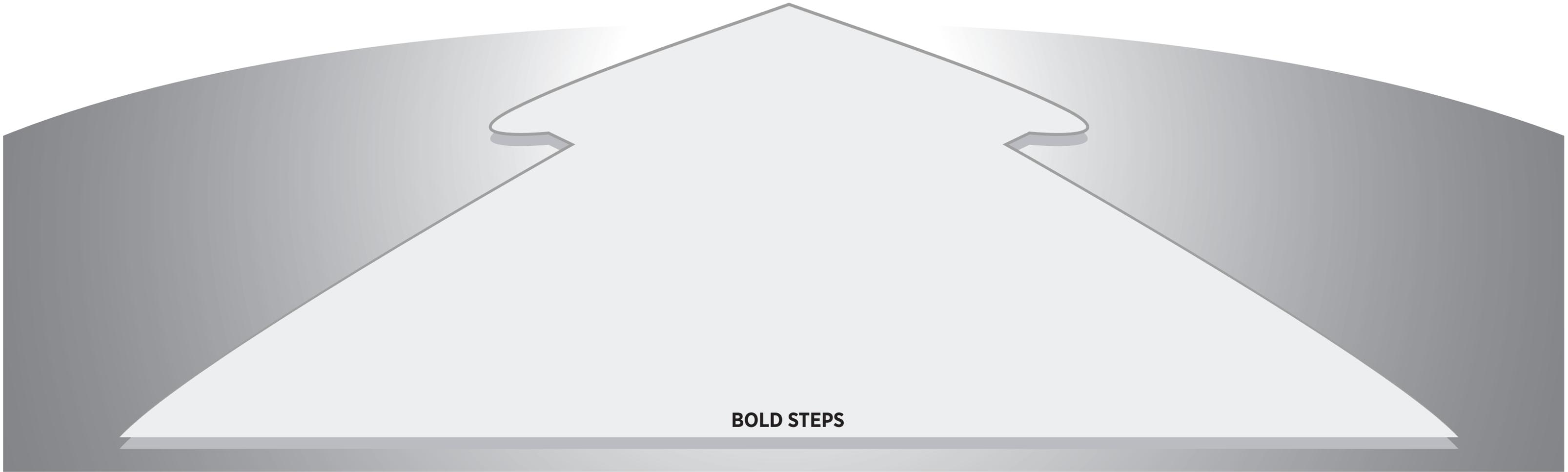
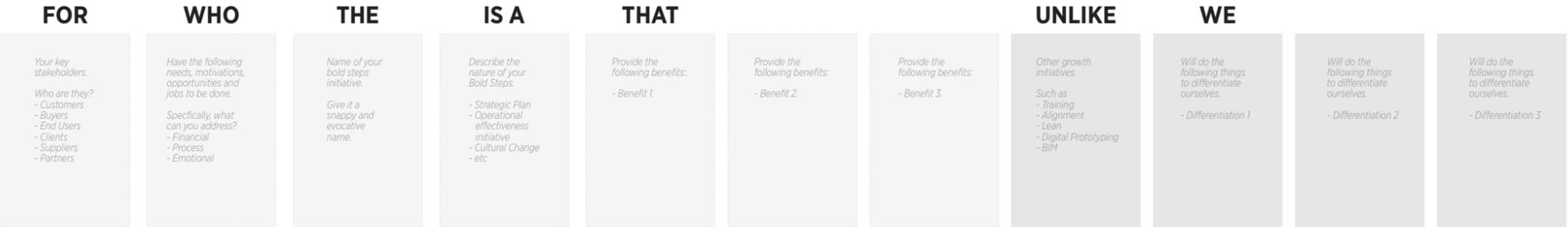
Will do the following things to differentiate ourselves.

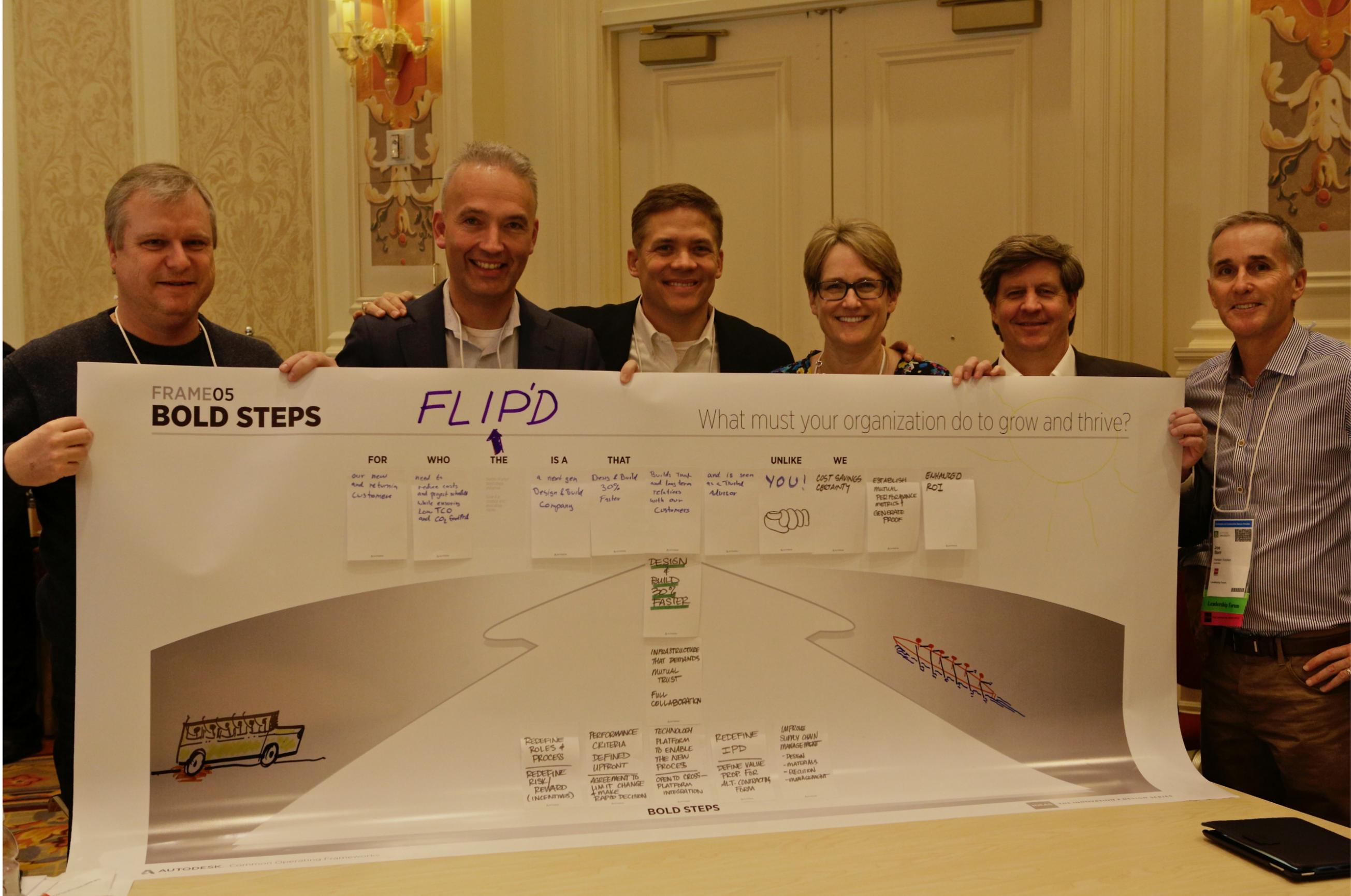
- Differentiation 3



FRAME05
BOLD STEPS

What must your organization do to grow and thrive?





FRAME05
BOLD STEPS

FLIP'D

What must your organization do to grow and thrive?

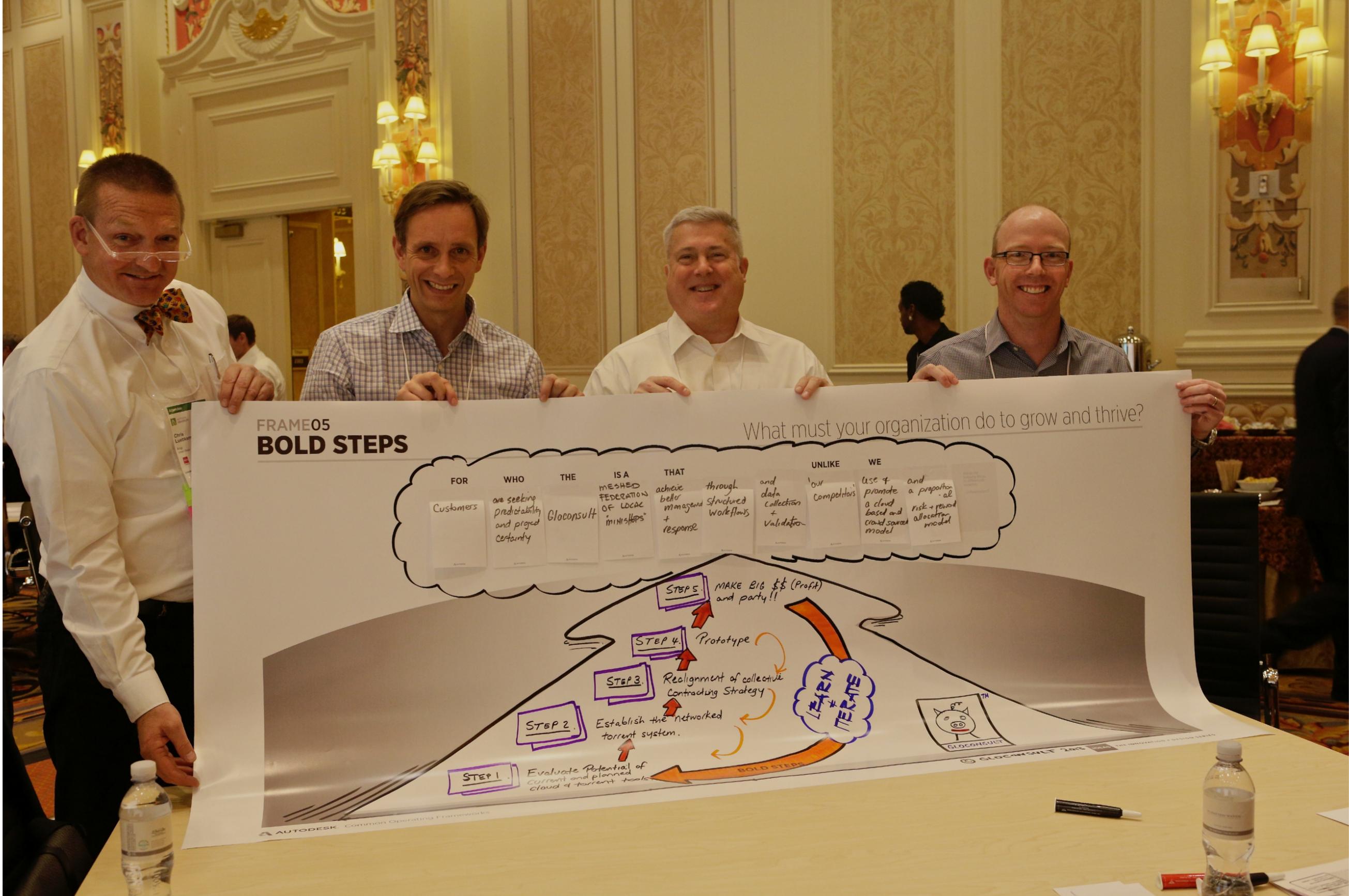
FOR our new and returning customers	WHO need to reduce costs and project schedule while ensuring Low TCO and CO ₂ footprint	THE new generation of project managers	IS A a next gen Design & Build Company	THAT Design & Build 30% Faster	UNLIKE YOU! Builds Trust and long term relations with our customers and is seen as a Trusted Advisor	WE COST SAVINGS CERTAINTY	ENHANCED ROI ESTABLISH MUTUAL PERFORMANCE METRICS + GENERATE PROOF
---	--	--	--	--	--	-------------------------------------	--

DESIGN & BUILD 30% FASTER

INFRASTRUCTURE THAT DEMANDS MUTUAL TRUST
FULL COLLABORATION

REDEFINE ROLES & PROCESS	PERFORMANCE CRITERIA DEFINED UPFRONT	TECHNOLOGY PLATFORM TO ENABLE THE NEW PROCESS	REDEFINE IPD	IMPROVE SUPPLY CHAIN MANAGEMENT
REDEFINE RISK/REWARD (INCENTIVES)	AGREEMENT TO LIMIT CHANGE & MAKE RAPID DECISION	OPEN TO CROSS-PLATFORM INTEGRATION	DEFINE VALUE PROP. FOR ALT. CONTRACTING FORM	- DESIGN - MATERIALS - DELIVERY - MANAGEMENT

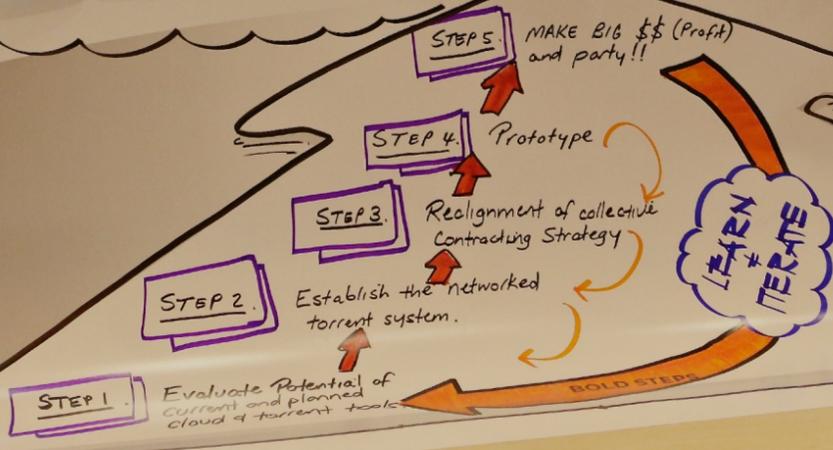
BOLD STEPS



FRAME05
BOLD STEPS

What must your organization do to grow and thrive?

FOR WHO THE IS A THAT UNLIKE WE
Customers are seeking predictability and project certainty
Gloconsult
MESHED FEDERATION OF LOCAL "mini-hubs"
achieve better management + response through structured workflows and data collection + validation
our competitors use & promote a cloud based and crowd-sourced model and a proportional risk + reward allocation model





FRAME05 BOLD STEPS

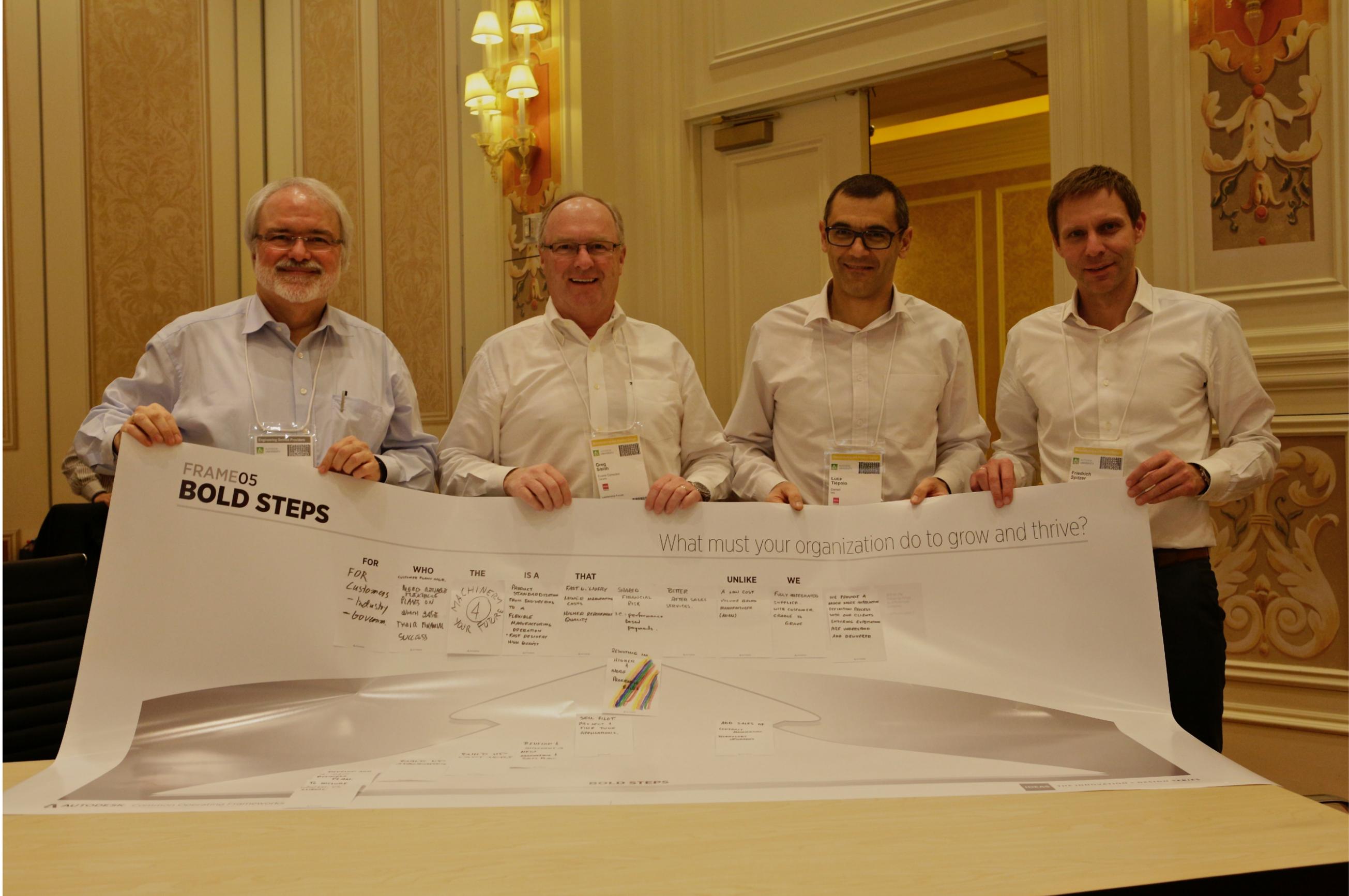
FOCUS
"NICHE GLOBAL
PROBLEM"
"1-STOPSHOP
FOR THIS NICHE"

FOR	WHO	THE	IS A	THAT	UNLIKE	WE
LIFELONG LEARNERS	GANESHA GROUP	AN INTEGRATED LEARNING ENVIRONMENT (BOTH PHYSICAL / VIRTUAL) (SYSTEM)	FOR STUDENTS	HYBRID/ABLE + MOBILE + PERSONAL + RELIABLE + SUSTAINABLE SOLUTION	CREATE END TO END SUSTAINABLE SOLUTIONS OPTIMIZING OPEX+CAPEX	NON-CURRENT EDUCATION SOLUTIONS (SCHOOLS)
NEED SKILLS, EXPERIENCE, KNOWLEDGE IN ALL APPROX. ENVIRONMENT						IDENTIFY LEARNING OUTCOMES AND PLOT...
						CREATE PERSONAL LEARNING PLANS & JOURNEYS
						CREATE NETWORKS OF LEARNERS + EXPERTS
						COMBINES FREE + LOW-COST COURSE WITH IN-PERSON LEARNING EXPERIENCES

What must your organization do to grow and thrive?

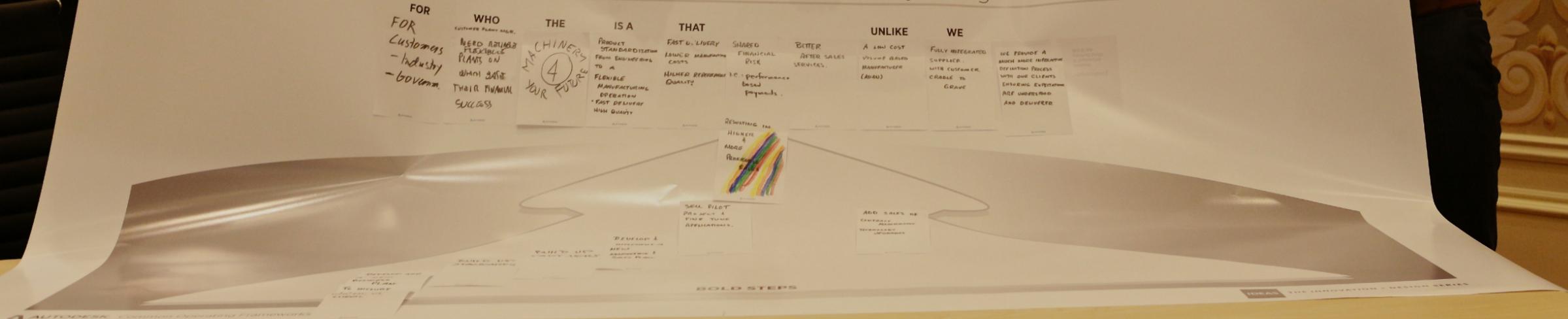
EDUCATION LEADERSHIP

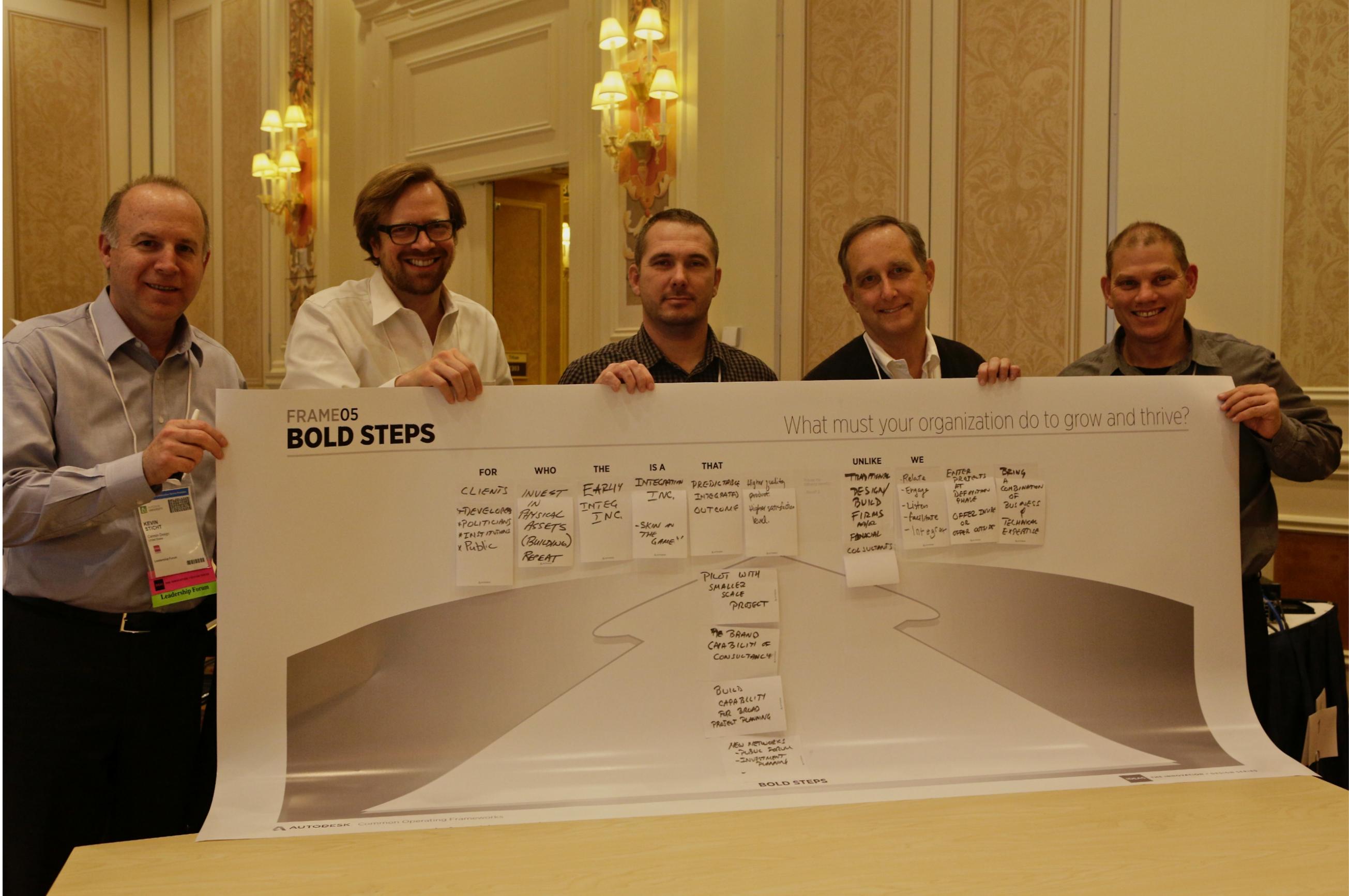
IN-HOUSE EDUCATIONAL PROGRAMS
EDUCATIONAL PROGRAMS
LIFE-TO-LEARNING
PERSONALIZED LEARNING
ANALYTICS
PERSONALIZED LEARNING
PERSONALIZED LEARNING
PERSONALIZED LEARNING
PERSONALIZED LEARNING



**FRAME05
BOLD STEPS**

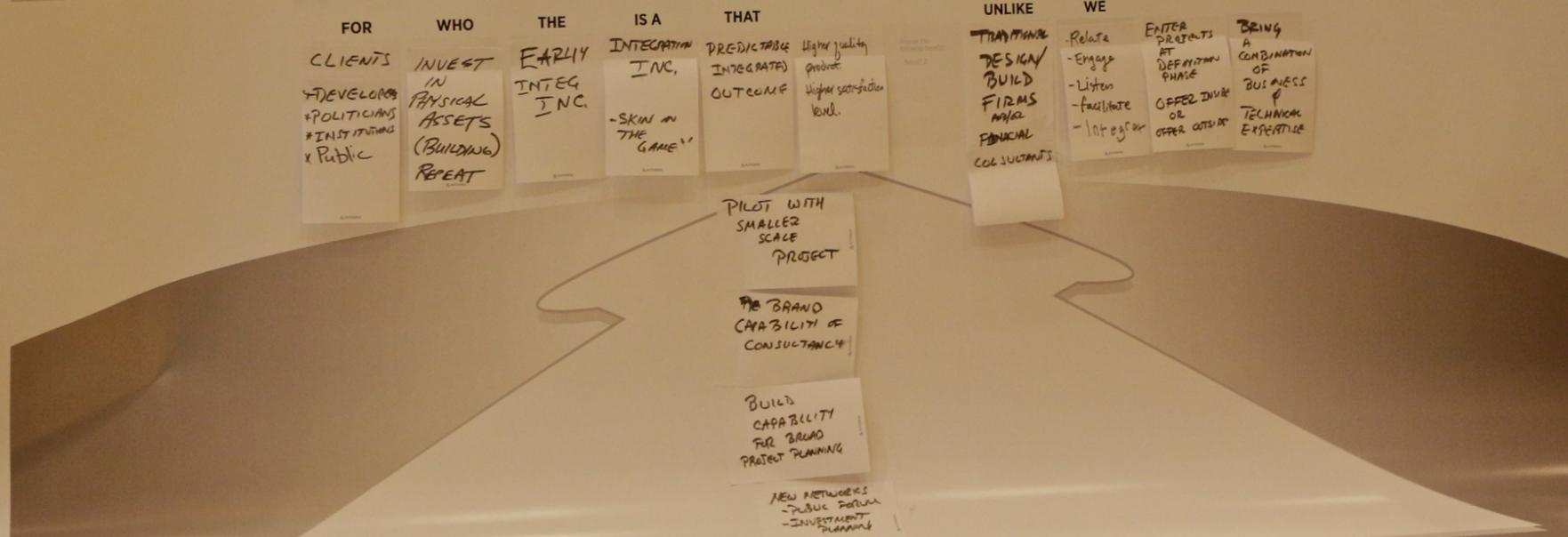
What must your organization do to grow and thrive?

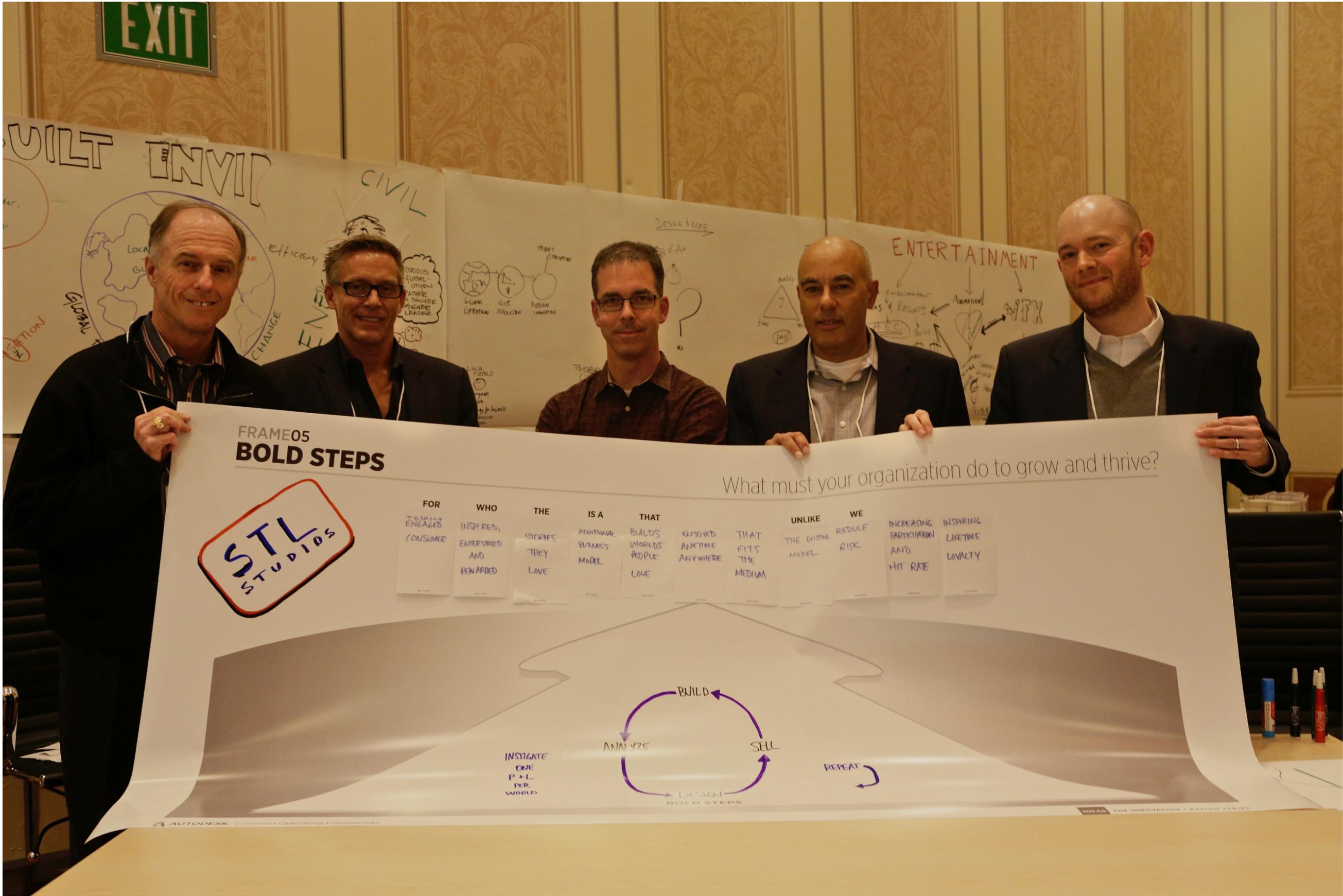




FRAME05
BOLD STEPS

What must your organization do to grow and thrive?



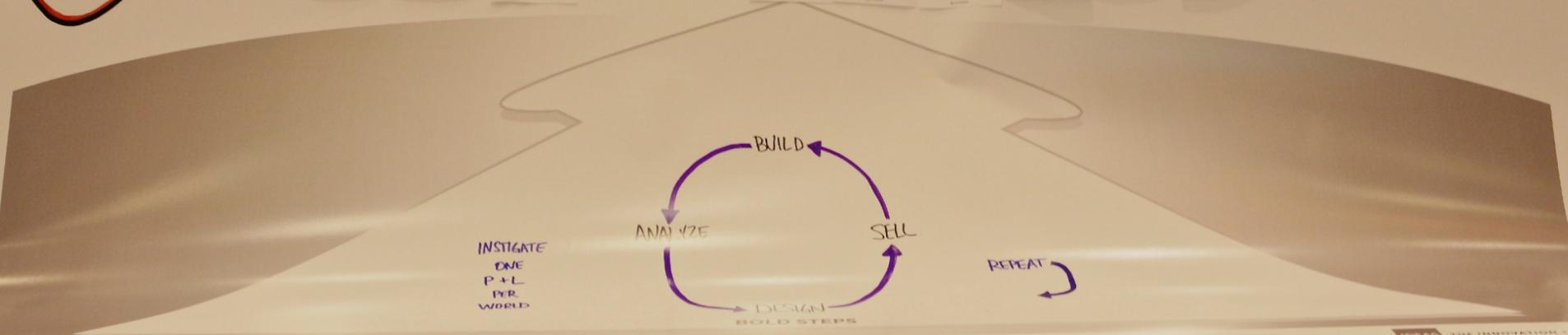


**FRAME05
BOLD STEPS**



What must your organization do to grow and thrive?

FOR TOTALLY ENGAGED CONSUMER	WHO INSPIRES, ENTERTAINED AND REWARDED	THE STORIES THEY LOVE	IS A ADDITIONAL BUSINESS MODEL	THAT BUILDS WORLDS PEOPLE LOVE	ENJOYED ANYTIME ANYWHERE	THAT FITS THE MEDIUM	UNLIKE THE EXISTING MODEL	WE REDUCE RISK	INCREASING PARTICIPATION AND HIT RATE	INSPIRING LIFETIME LOYALTY
---------------------------------------	--	--------------------------------	---	--	--------------------------------	-------------------------------	---------------------------------	----------------------	--	----------------------------------



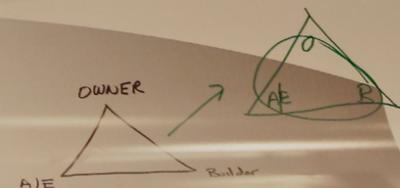
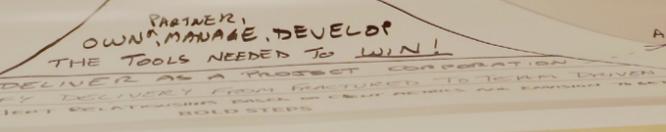


FRAME05
BOLD STEPS

MASTER Inc.

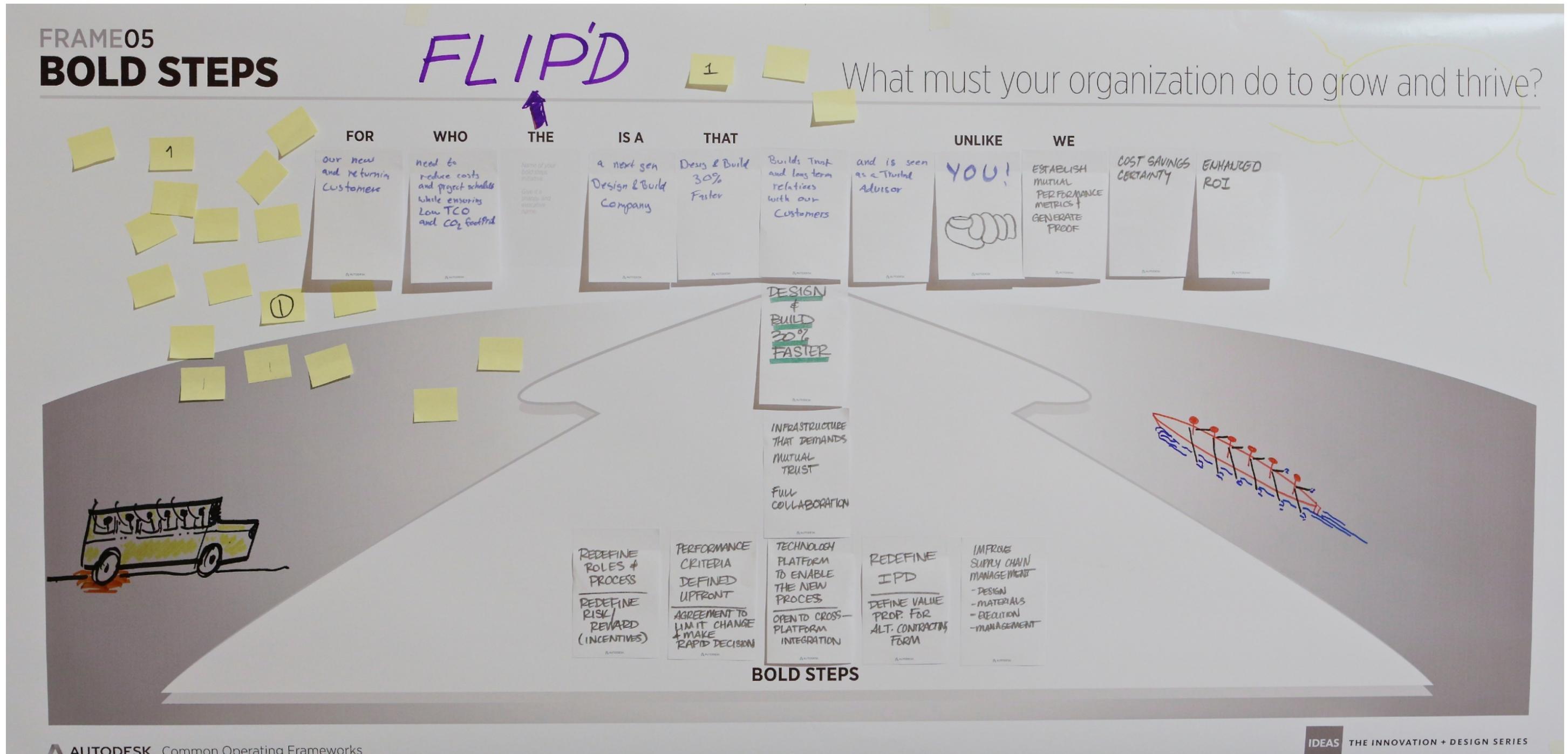
What must your organization do to grow and thrive?

FOR	WHO	THE	IS A	THAT	THAT PROVIDES	THAT	UNLIKE	WE	ENGAGE AT AN EARLIER POINT IN THE VALUE CHAIN, MORE STRATEGICALLY	MAINTAIN DIRECT CUSTODIAL RELATIONSHIP WITH PROJECT DATA THROUGH LIFECYCLE OF THE ASSET	TO COOL THE (NEW) POTATO
SOPHISTICATED OWNER USERS OPERATIONAL DRIVEN DESIGN. BUILDER SOFTWARE TECHNOLOGY	HAS HIGH VOLUME OF NEED & VALUES STRATEGIC PARTNERSHIP	MASTER Inc.	APPRENTICE PROBLEM SOLVING PARTNER WITH OTHER PROFESSIONALS & ORGANIZATIONS	PROVIDES INTEGRATED BUSINESS VALUE	SPEEDS QUALITY OPERABILITY CREATES BETTER FUNCTIONAL OUTCOMES	REDUCES RISK FOR ALL PARTIES	TRADITIONAL DESIGN SERVICE PROVIDERS THAT FOCUS ON PROFITS	WE FOCUS ON UNIQUE INTELLECTUAL VALUE, NOT COMMODITIZED, HIGH RISK SERVICES			



BOLD STEPS

TEAM ONE:
Architecture, Engineering, Construction



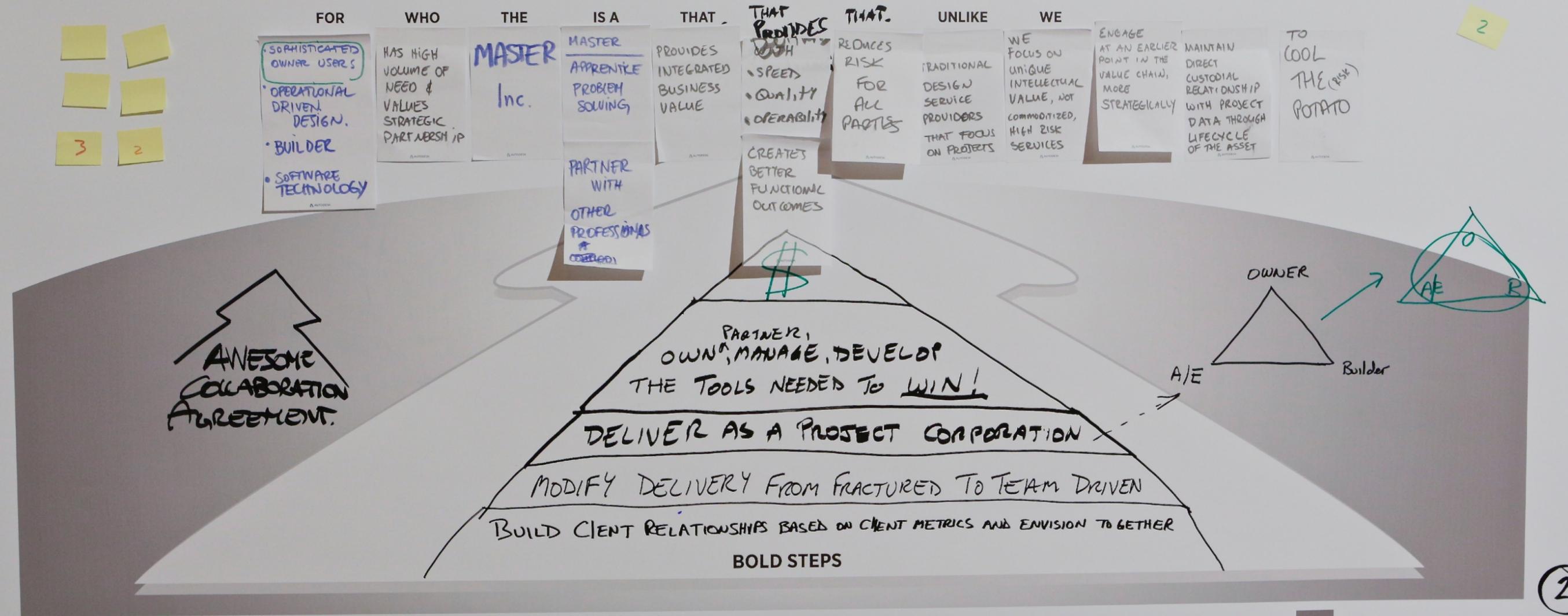
BOLD STEPS

TEAM TWO:
Architecture, Engineering, Firms

FRAME05
BOLD STEPS

MASTER Inc.

What must your organization do to grow and thrive?

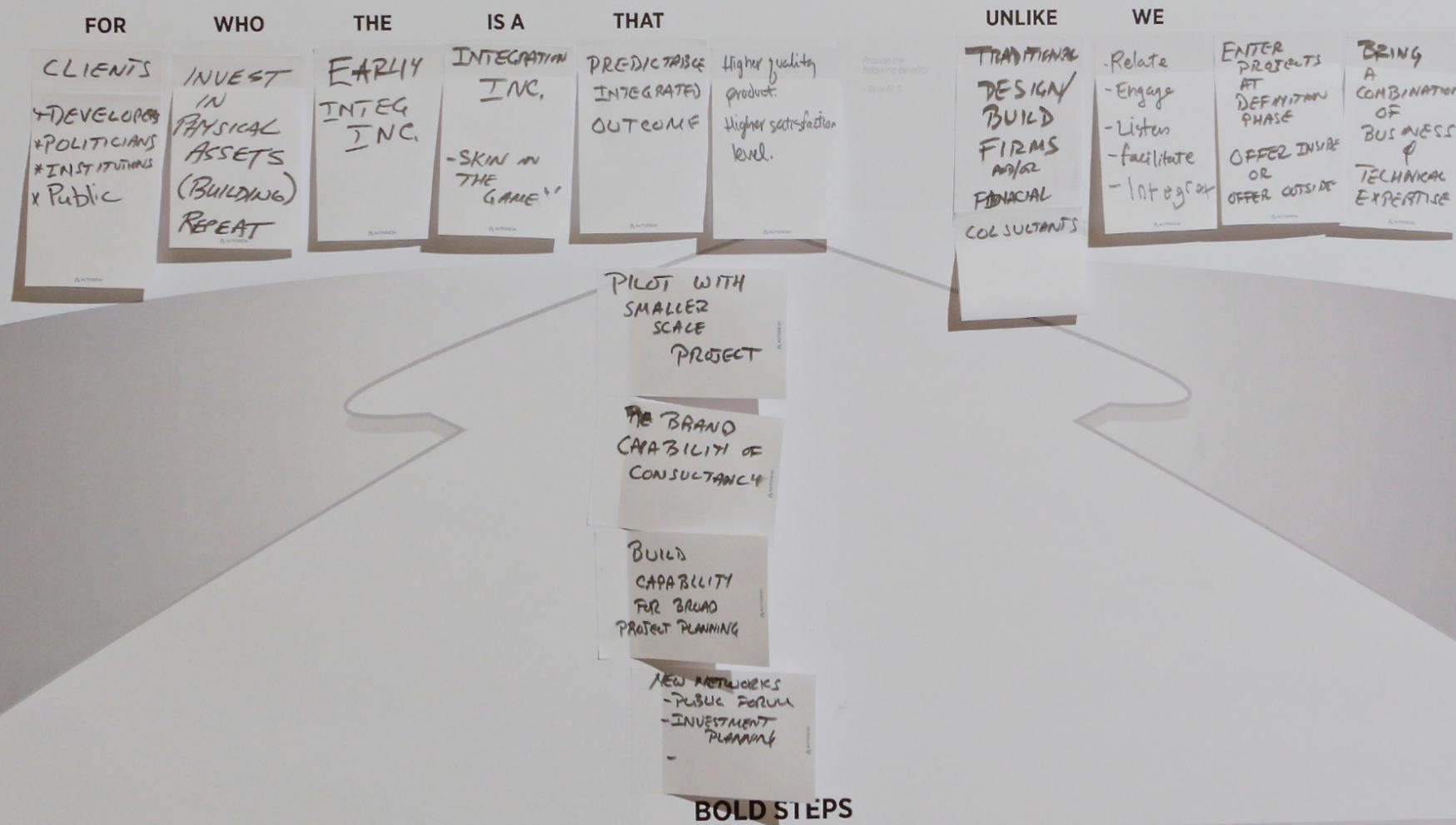


BOLD STEPS

TEAM THREE: Built Environment

FRAME05 BOLD STEPS

What must your organization do to grow and thrive?

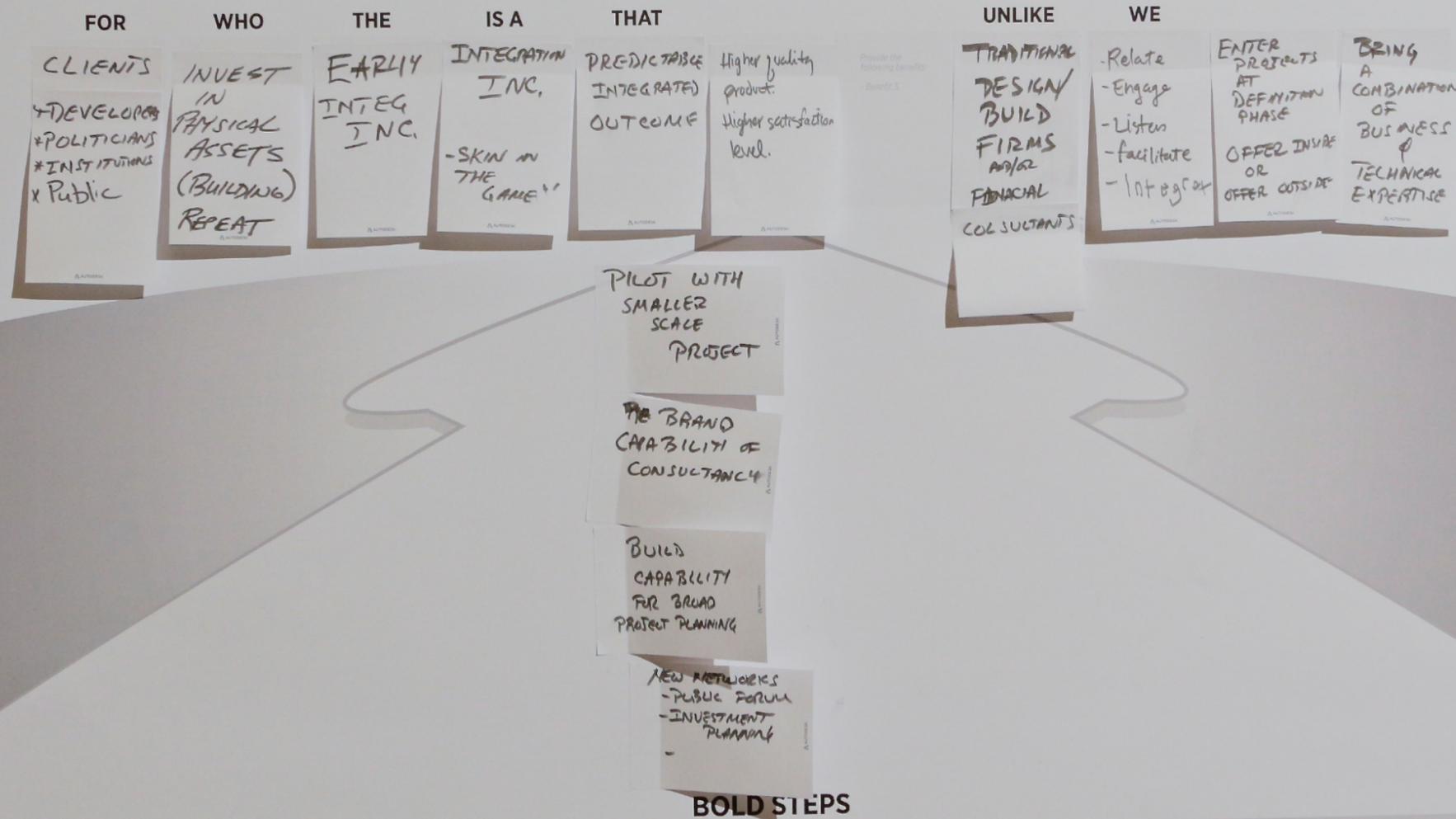


BOLD STEPS

TEAM FOUR: Managing Design & Build

FRAME05 BOLD STEPS

What must your organization do to grow and thrive?

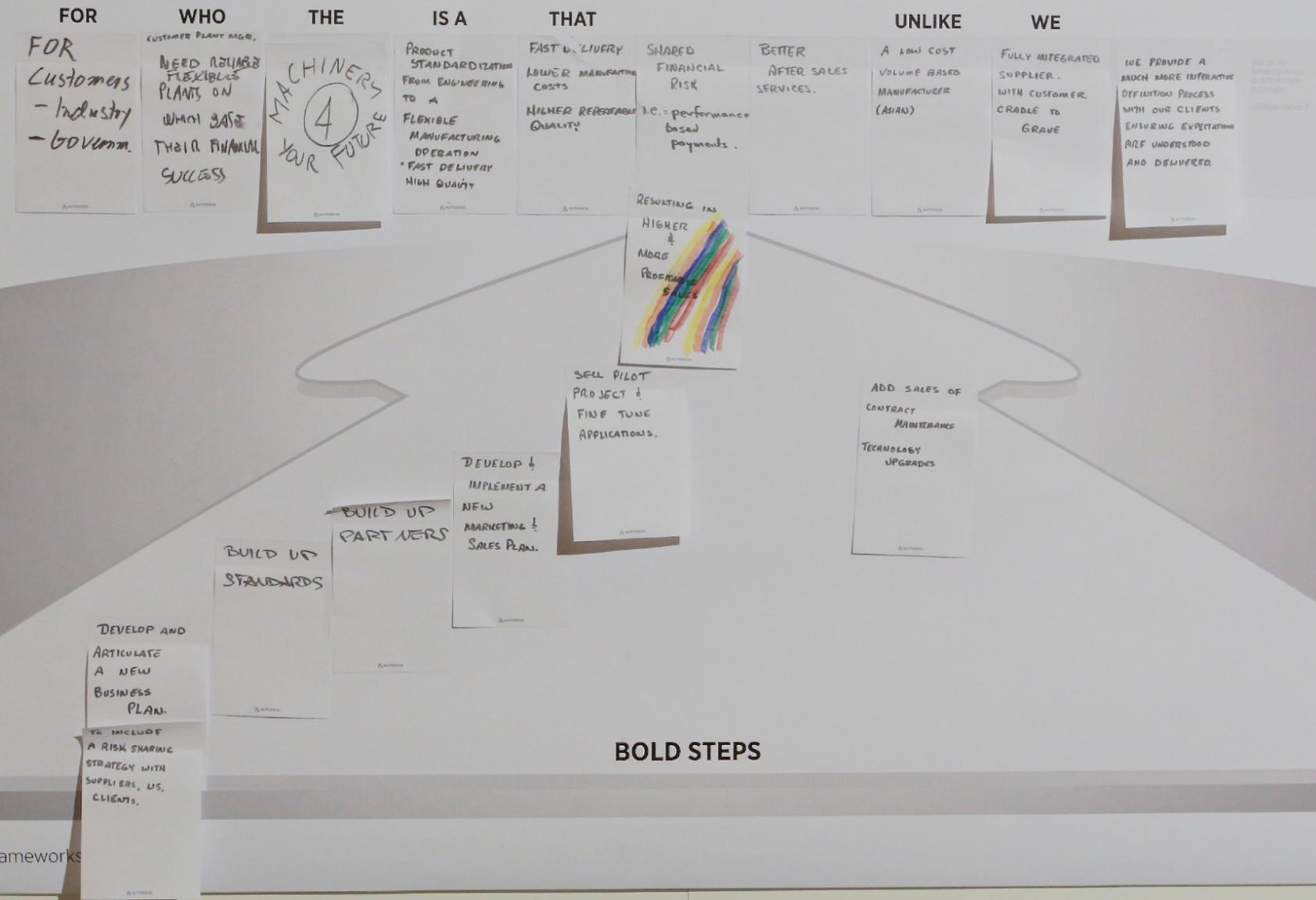


BOLD STEPS

TEAM FIVE: Design & Manufacturing

FRAME05 BOLD STEPS

What must your organization do to grow and thrive?



BOLD STEPS

TEAM SIX: Design & Construction

FRAME05 **BOLD STEPS** What must your organization do to grow and thrive?

FOCUS
"NICHE GLOBAL PROBLEM"
"1-STOP SHOP FOR THIS NICHE"

FOR	WHO	THE	IS A	THAT	UNLIKE	WE
LIFELONG LEARNERS	NEED SKILLS, EXPERIENCE, KNOWLEDGE IN AN AFFORDABLE ENVIRONMENT	GANESHA GROUP	AN INTEGRATED LEARNING ENVIRONMENT (BOTH PHYSICAL & VIRTUAL) (SYSTEM)	FOR STUDENTS AFFORDABLE * MOBILE * PERSONAL * RELIABLE TRUSTABLE SUSTAINABLE SOLUTION	CREATE END TO END, SUSTAINABLE SOLUTIONS OPTIMIZING CAPEX+OPEX	<p>UNLIKE CURRENT EDUCATION SOLUTIONS (SCHOOLS)</p> <p>WE IDENTIFY LEARNING OUTCOMES AND PLOT... CREATE PERSONAL LEARNING PLANS & JOURNEYS CREATE NETWORKS OF LEARNERS & EXPERTS COMBINES FREE & LOW-COST CONTENT WITH IN-PERSON LEARNING EXPERIENCES</p>

GANESHA GROUP

LEADERSHIP

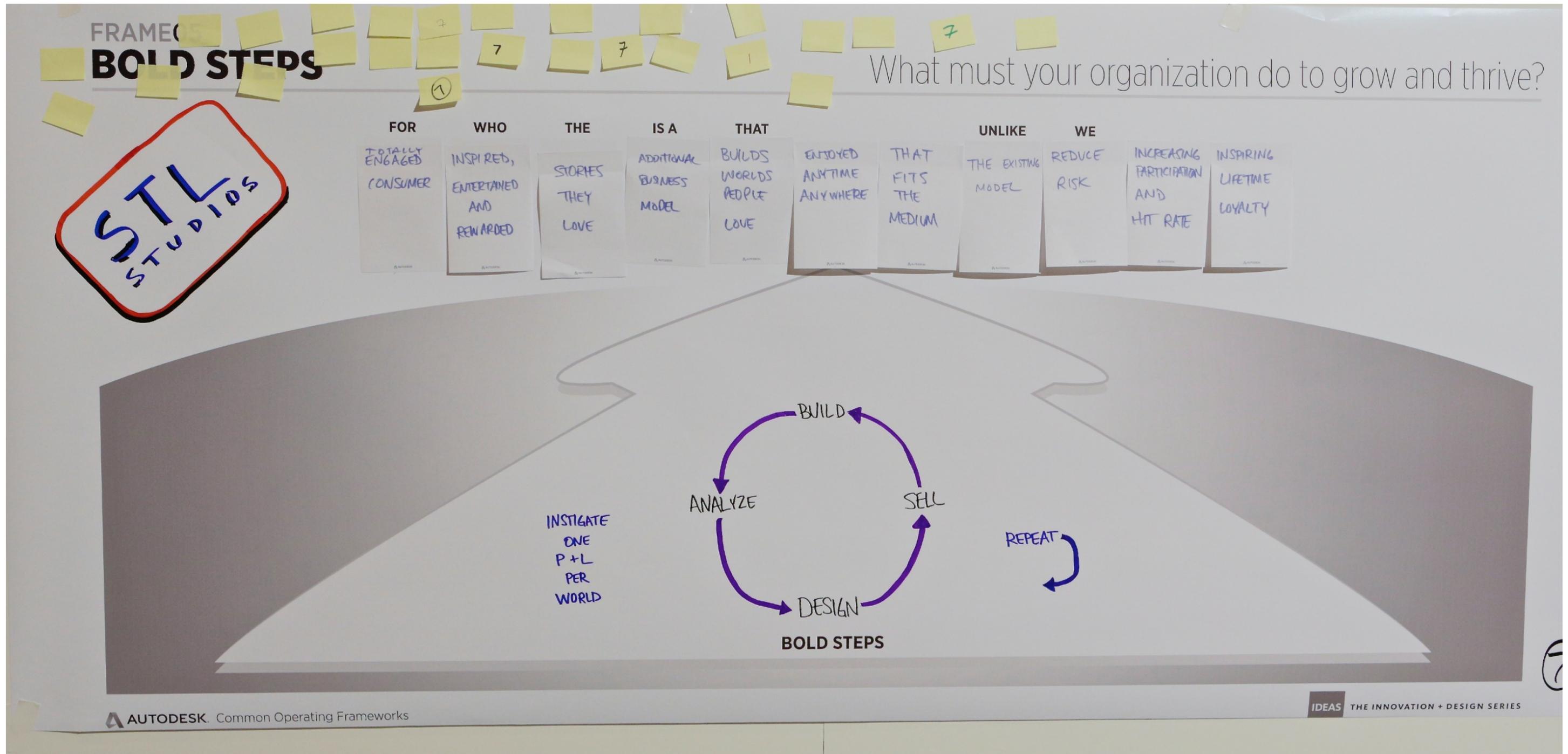
- TOOLING
 - BIM
 - SIMULATION
 - COMPUTATION
- IN-HOUSE EDUCATION PROFESSIONALS
- ESTABLISH FUNDING RESOURCES
- DEEP UNDERSTANDING OF THE EDUCATION SYSTEM
- ASSESSMENT METRICS + ANALYTICS
- OUTCOME FOCUSED MODELS
- EMPLOYEE EDUCATORS
- LISTEN
- RESEARCH
- OBTAIN ACADEMIA BUY-IN

AUTODESK. Common Operating Frameworks

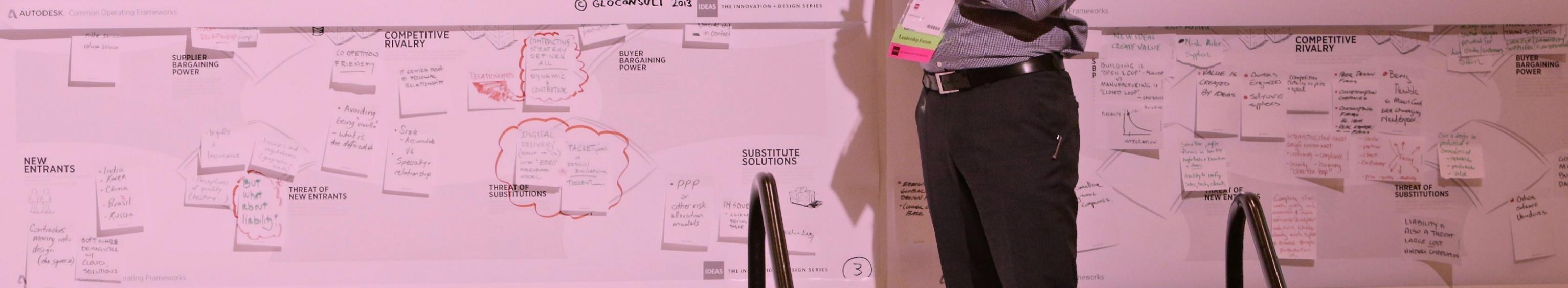
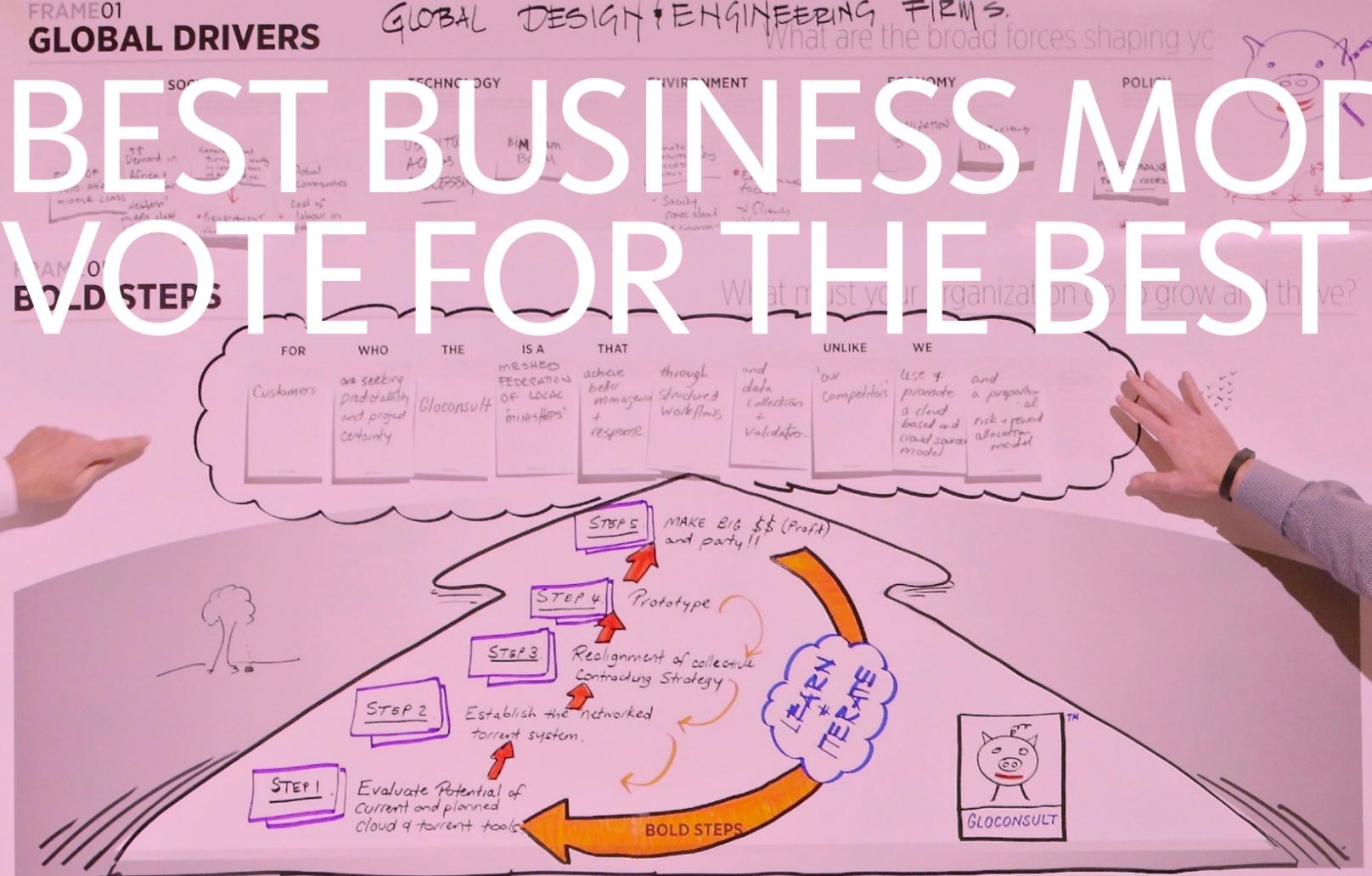
IDEAS THE INNOVATION + DESIGN SERIES

BOLD STEPS

TEAM SEVEN: Entertainment



BEST BUSINESS MODELS VOTE FOR THE BEST THREE



BEST BUSINESS MODELS VOTE FOR THE BEST THREE

Each team make a 90 second pitch that illustrated their business model.

Collectively, the group voted to select the best, most innovative model, as well as the best presentation.

What are the broad forces shaping your industry?

ECONOMY

- RISK BEING PUSHED TO CONTRACTORS DISTORTION B/LW RISK & REWARD
- MARGIN PRESSURE - NEEDS TO MAKE A RETURN

POLICY

- Economic uncertainty is stifling productivity.
- Integrated thinking is required for success
- Awareness of legal requirements in the synthetic or virtual world
- policy making has become stratified - non-productive "collaboration" is losing!
- DATA OWNERSHIP & SECURITY GLOBALLY IS HEAVILY REGULATED & VERY COMPLEX
- Reduced funding, government (Fed, State, ...) projects
- Uncertainty in private funding
- ACA IMPACT ON HEALTHCARE PROVIDERS: HOW THEY DELIVER SERVICES

NEW FINANCE

- "Buyer's Market" - increased commoditization

ENVIRONMENTAL

- Environmental preservation is still an option versus necessity
- Awareness to finiteness of global resources is growing!

GLOBAL DRIVERS

SOCIETY

- INCREASING Digital HUMAN INTERACTION - ONLINE GAMING - TEXTING
- CONNECTING through social media
- Construction is reassembling Manufacturing & Manufacturing Systems
- INCREASING DATA COMPLEXITY & AVAILABILITY DURABLE DESIGN
- SPEED DEMANDS INSTANT GRATIFICATION
- INCREASING PRESSURE TO OPERATE SUSTAINABLY
- COMMUNICATION OF TODAY'S REALITY
- INCREASING PRESSURE TO ELIMINATE WASTE /

MASTER Inc.

FRAME05 BOLD STEPS

FOR WHO THE IS A THAT

FOR

- SOPHISTICATED OWNER USERS
- OPERATIONAL DRIVEN DESIGN.
- BUILDER
- SOFTWARE TECHNOLOGY

WHO

HAS HIGH VOLUME OF NEED & VALUES STRATEGIC PARTNERSHIP

THE

MASTER Inc.

IS A

MASTER APPRENTICE PROBLEM SOLVING

THAT

PROVIDES INTEGRATED BUSINESS VALUE

PARTNER WITH OTHER PROFESSIONALS & ORGANIZATIONS

WE ENGAGE AT AN EARLIER POINT IN THE VALUE CHAIN, MORE STRATEGICALLY

What must your organization do to grow and thrive?

UNLIKE YOU!

and is seen as a Trusted Advisor

ESTABLISH MUTUAL PERFORMANCE METRICS & GENERATE PROOF

COST SAVINGS CERTAINTY

ENHANCED ROI

REDEFINE IPD

DEFINE VALUE PROP. FOR ALT. CONTRACTING FORM

IMPROVE SUPPLY CHAIN MANAGEMENT

- DESIGN
- MATERIALS
- EXECUTION
- MANAGEMENT



AUTODESK. Common Operating Frameworks

FRAME05
BOLD STEPS

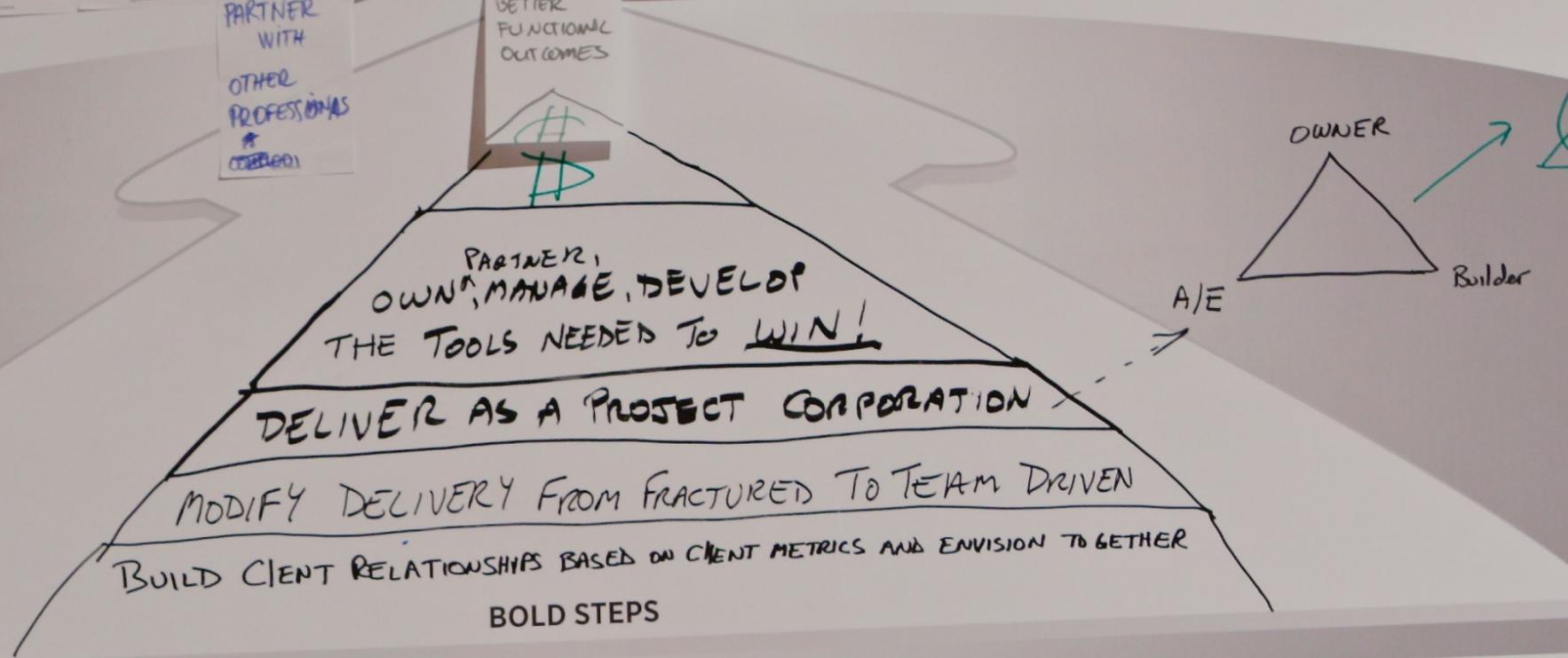
MASTER Inc.

What must your organization do to grow and thrive

FOR WHO THE IS A THAT THAT UNLIKE WE

- FOR: SOPHISTICATED OWNER USERS, OPERATIONAL DRIVEN DESIGN, BUILDER, SOFTWARE TECHNOLOGY
- WHO: HAS HIGH VOLUME OF NEED & VALUES STRATEGIC PARTNERSHIP
- THE: MASTER Inc.
- IS A: MASTER APPRENTICE PROBLEM SOLVING, PARTNER WITH OTHER PROFESSIONALS
- THAT: PROVIDES INTEGRATED BUSINESS VALUE, CREATES BETTER FUNCTIONAL OUTCOMES
- THAT: PROVIDES RISK FOR ALL PARTIES
- UNLIKE: TRADITIONAL DESIGN SERVICE PROVIDERS THAT FOCUS ON PROJECTS
- WE: WE FOCUS ON UNIQUE INTELLECTUAL VALUE, NOT COMMODITIZED, HIGH RISK SERVICES

AWESOME COLLABORATION AGREEMENT.



IDEAS THE INNOVATION + DESIGN



COMPETITIVE RIVALRY

- FIELD BY SOFTWARE MONOPOLY. USP
- INCREASE OFFSHORE - ASIA
- DATA ANALYTICS - BIG DATA
- 7 PARTNERSHIP WITH ACTUAL IT FIRM
- OWN & MANAGE THE DATA, ANALYSIS, LIFECYCLE
- WORKFLOW TO MASTER INC
- STRUCTURE OF FIRM
- BOLD STEPS TO GET THERE
- RELATIONSHIP
- RESHOPPING
- CHANGE THE DELIVERY
- BOUTIQUE & SPECIALTY INSTITUTION

INCREASING through social media

DIFFERENT generations

AVAILABILITY DURING DESIGN

OF REALITY WASTE

non-productive "collaboration" is losing!

SECURITY GLOBALITY IS HEAVILY REGULATED VERY COMPLEX

grow and thrive?

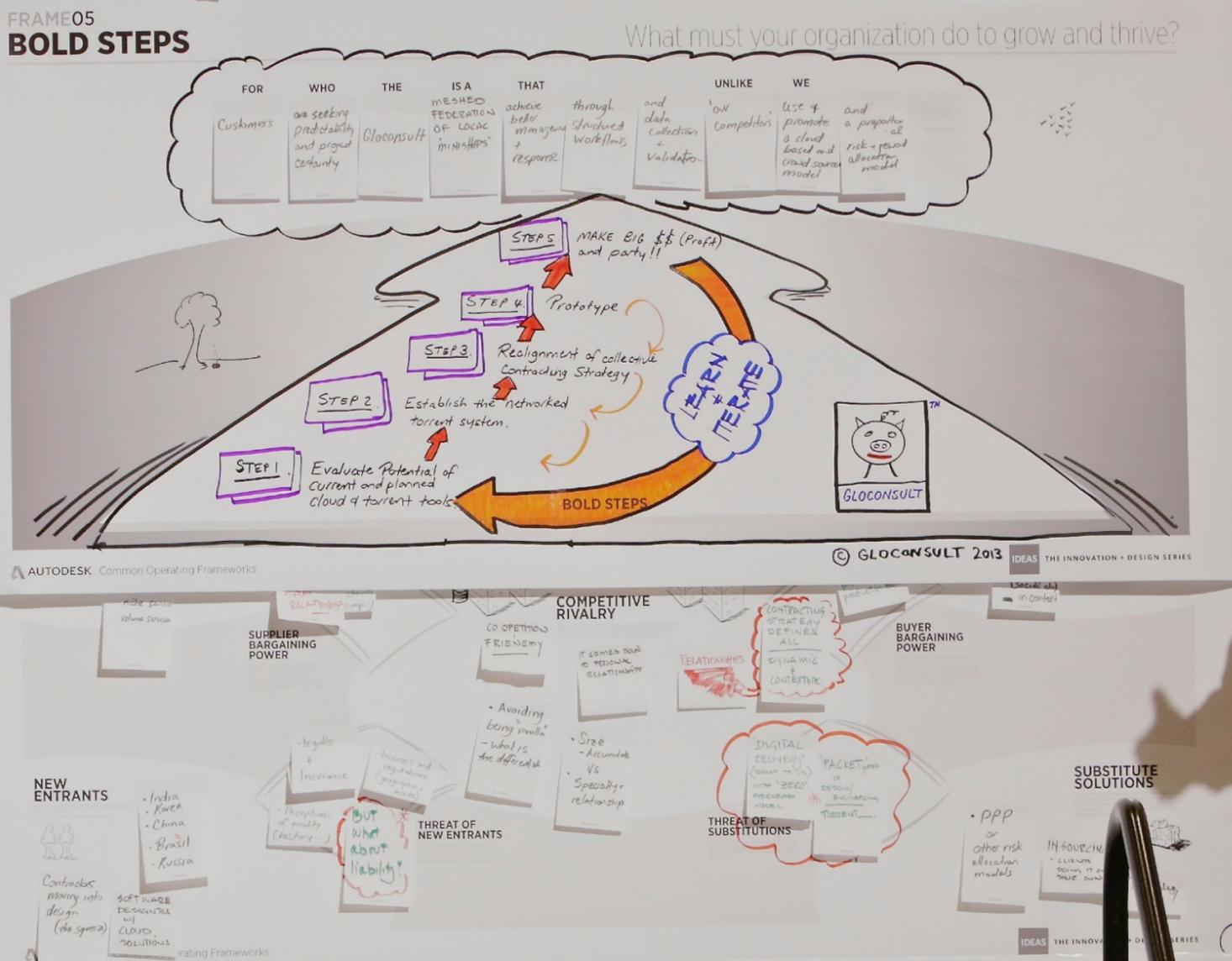
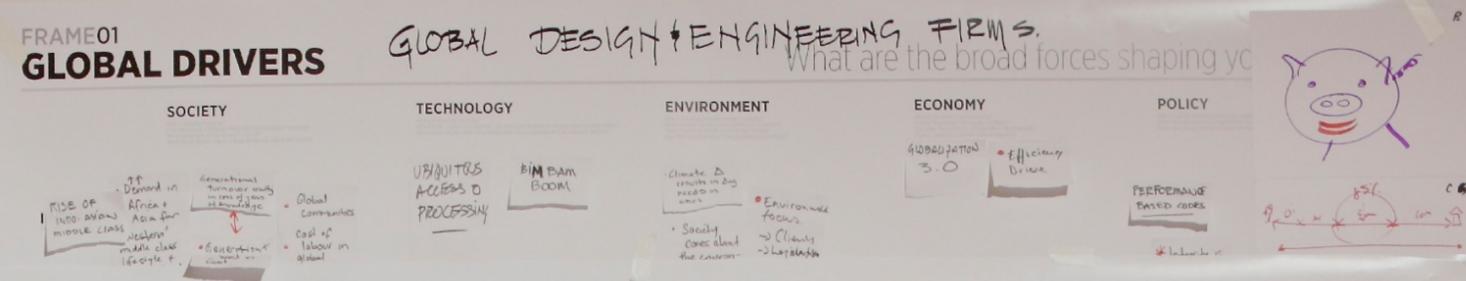
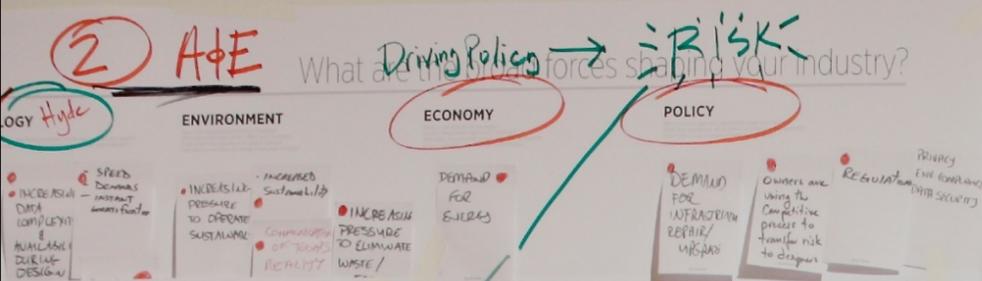
TO COOL THE (RISK) POTATO

ENGAGE AT AN EARLIER POINT IN THE VALUE CHAIN, MORE STRATEGICALLY

MAINTAIN DIRECT CUSTODIAL RELATIONSHIP WITH PROJECT DATA THROUGH LIFECYCLE OF THE ASSET

CONTRADICTORY

CONFUSION OF WHAT YOU ARE REALLY



higher satisfaction
level.

DESIGN
BUILD
FIRMS
AND/OR
FINANCIAL
CONSULTANTS

- Engage
- Listen
- Facilitate
- Integrate

AT DEFINITION
PHASE
OFFER INVITE
OR
OFFER OUTSIDE

A COMBINATION
OF
BUSINESS
&
TECHNICAL
EXPERTISE

OFFER INVITE
OR
OFFER OUTSIDE

* POLITICIANS
* INSTITUTIONS
& Public

H
CT

OF
NC4

Y
NG

WORKS
FORUM
MENT
ANNOUNCE

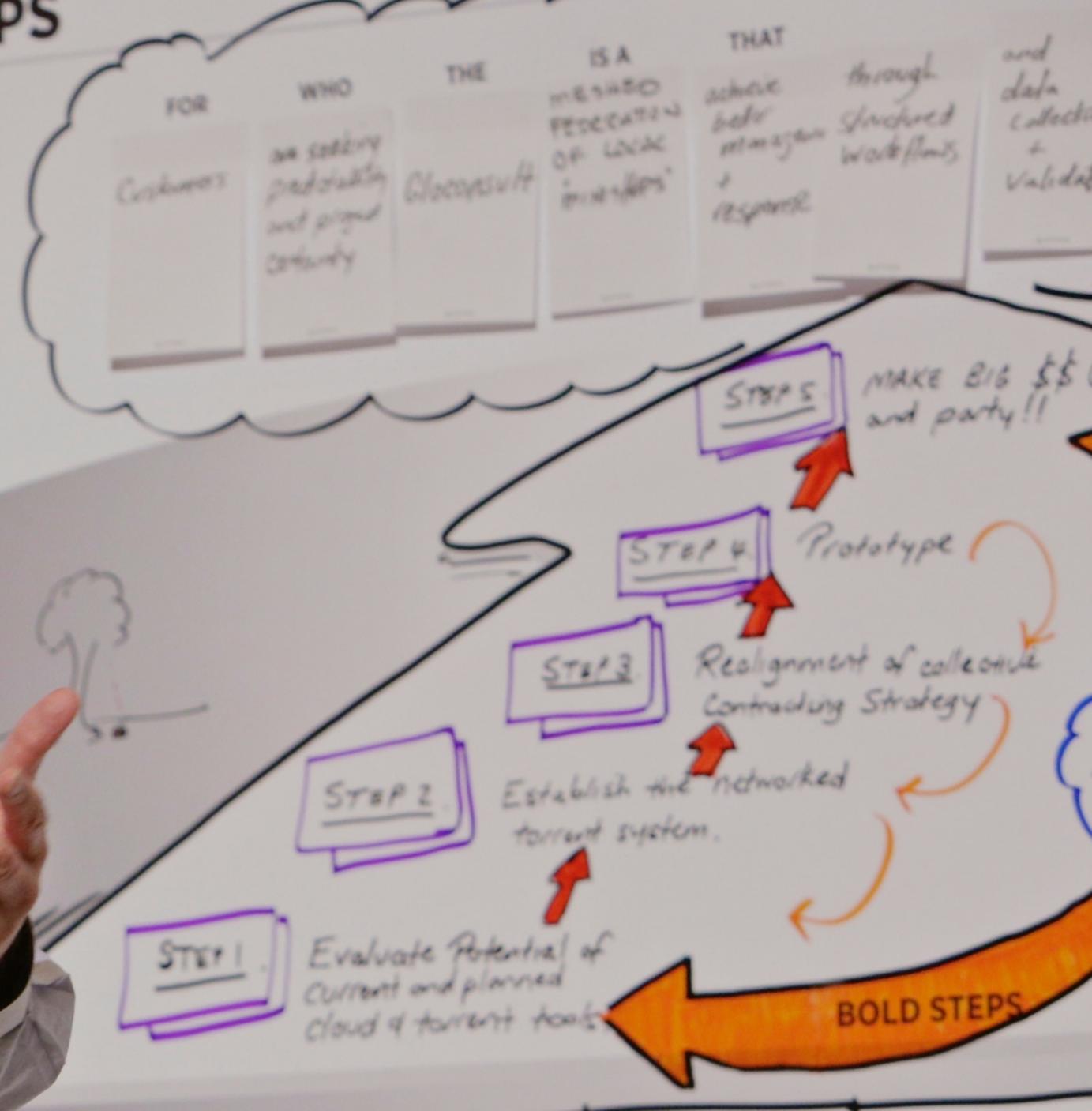
LD STEPS



Attendee
 AUTODESK UNIVERSITY
 Karim Khalifa
 Marriott International
 United States
 Leadership Forum



FRAME05 BOLD STEPS



Architecture and Construction Service Providers

AUTODESK UNIVERSITY

KEVIN STICHT
Cannon Design
United States

IDEAS

Leadership Forum

IDEAS THE INNOVATION + DESIGN SERIES

Leadership Forum

AUTODESK Cannon Operating Frameworks

COMPETITIVE RIVALRY

IDEAS THE INNOVATION + DESIGN SERIES

5

within your industry?

BUYERS

- INDUSTRIAL
- GOVERNMENT
- INVESTORS
- RELIABILITY
- QUALITY
- PRODUCTIVITY
- ROI
- FLEXIBILITY
- SUSTAINABILITY

• Take the risk
 => make profit

- Understanding of the business of customers [Changes]

BOLD

FOCUS

"NICHE GLOBAL PROBLEM"

"1-STOPSHOP FOR THIS NICHE"



What must your organization

THAT

FOR STUDENTS

AFFORDABLE *
 MOBILE *
 PERSONAL *
 RELIABLE *
 TRUSTABLE *
 SUSTAINABLE *
 SOLUTION

UNLIKE

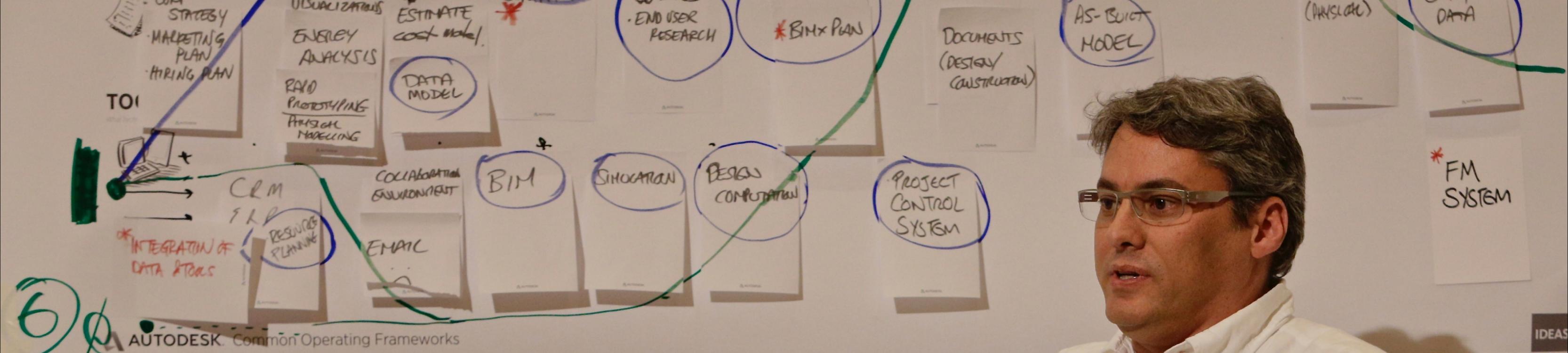
CURRENT EDUCATION SOLUTIONS (SCHOOLS)

WE

IDENTIFY LEARNING OUTCOMES AND PLOT...

CREATE PERSONALIZED LEARNING PLANS & JOURNEYS





AUTODESK. Common Operating Frameworks

FRAME05

BOLD STEPS

FOCUS
 "NICHE GLOBAL PROBLEM"
 "1-STOPSHOP FOR THIS NICHE"

FOR
 LIFELONG LEARNERS

WHO
 EXPERIENCE, KNOWLEDGE IN AN APPROPRIATE ENVIRONMENT

THE
 ENVIRONMENT (BOTH PHYSICAL + VIRTUAL) (SYSTEM)

RELIABLE TRUSTABLE SUSTAINABLE SOLUTION

SUSTAINABLE SOLUTIONS OPTIMIZING CAPEX+OPEX

COMBINES FREE & LOW-COST CONTENT WITH IN-PERSON LEARNING EXPERIENCES



Education
 AUTODESK UNIVERSITY
 Nathan Shedroff
 California College of the Arts
 United States
 Leadership Forum

STAKEHOLDERS

INDUSTRY
MEDIAS
COMPETITORS
PARTNERS
LEADERSHIP
EMPLOYEES

Client
Classes
Facilities

External
Regulatory
Gov.
COMMUNITY

Legal
PROJECT TEAM
CLIENT
PARTNERS

PROJECT TEAM
CLIENT
PARTNERS
EXT. GOV.

PROJECT TEAM
CLIENT
END USERS
GOV/REG
PARTNERS
COMMUNITY

SUBS/PARTNERS
CLIENT
END USERS?

Contractors
Sub-Contractors
Specialist supplier

* F.M.
Utilities

OUTPUTS

CORP STRATEGY
MARKETING PLAN
HIRING PLAN

VISUALIZATIONS
ENERGY ANALYSIS

ESTIMATE
COST MODEL

DATA MODEL

RAND PROTOTYPING
PHYSICAL MODELLING

* PROJECT PLAN
* BIMX

AS-BUILT MODEL

ASSET (PHYSICAL)

* O&M DATA

TOI

CRM
FLP

RESOURCES PLANNING

COLLABORATION ENVIRONMENT

BIM

SIMOCAT

EMATIC

* INTEGRATION OF DATA & TOOLS

* FM SYSTEM

AUTODESK Common Operating Frameworks

FRAME05

BOLD STEPS

FOCUS

"NICHE GLOBAL PROBLEM"
"1-STOPSHOP FOR THIS NICHE"

FOR

LIFELONG LEARNERS

WHO

NEED SKILLS, EXPERIENCE, KNOWLEDGE IN AN APPROVING ENVIRONMENT

THE

GANESHA GROUP

WE

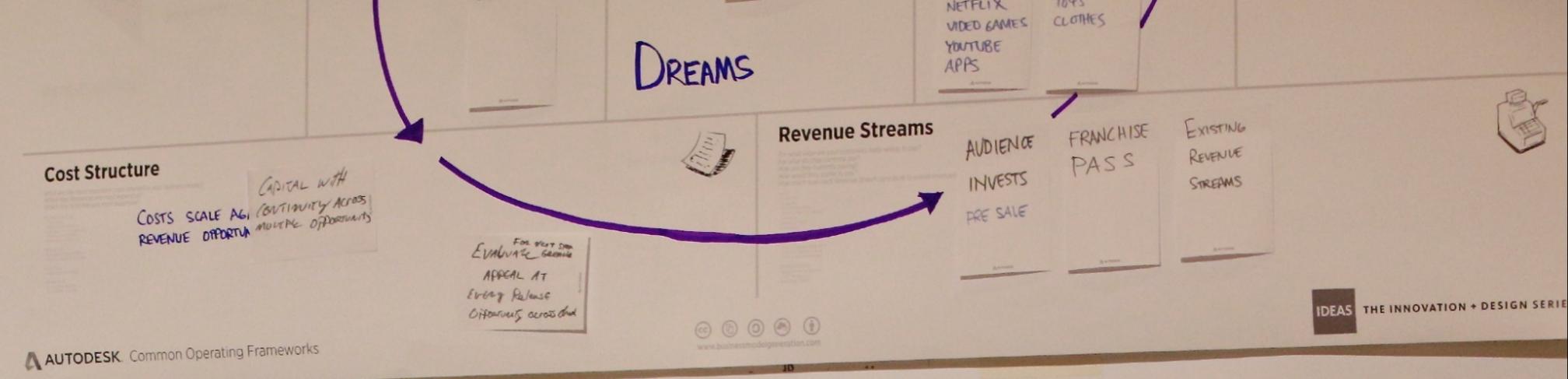
IDENTIFY LEARNING OUTCOMES AND PLOT...

CREATE PERSONAL LEARNING PLANS & JOURNEYS

CREATE NETWORKS OF LEARNERS & EXPERTS

COMBINES FREE & LOW COST CONTENT WITH IN-PEOPLE LEARNING EXPERIENCE

SPECS
DOCUMENTS (DESIGN/CONSTRUCTION)
AS-BUILT MODEL
ASSET (MANAGEMENT)
O&M DATA
PROJECT CONTROL SYSTEM



What must... thrive?

UNL

CREATE END-TO-END, SUSTAINABLE SOLUTIONS OPTIMIZING CAPEX+OPEX

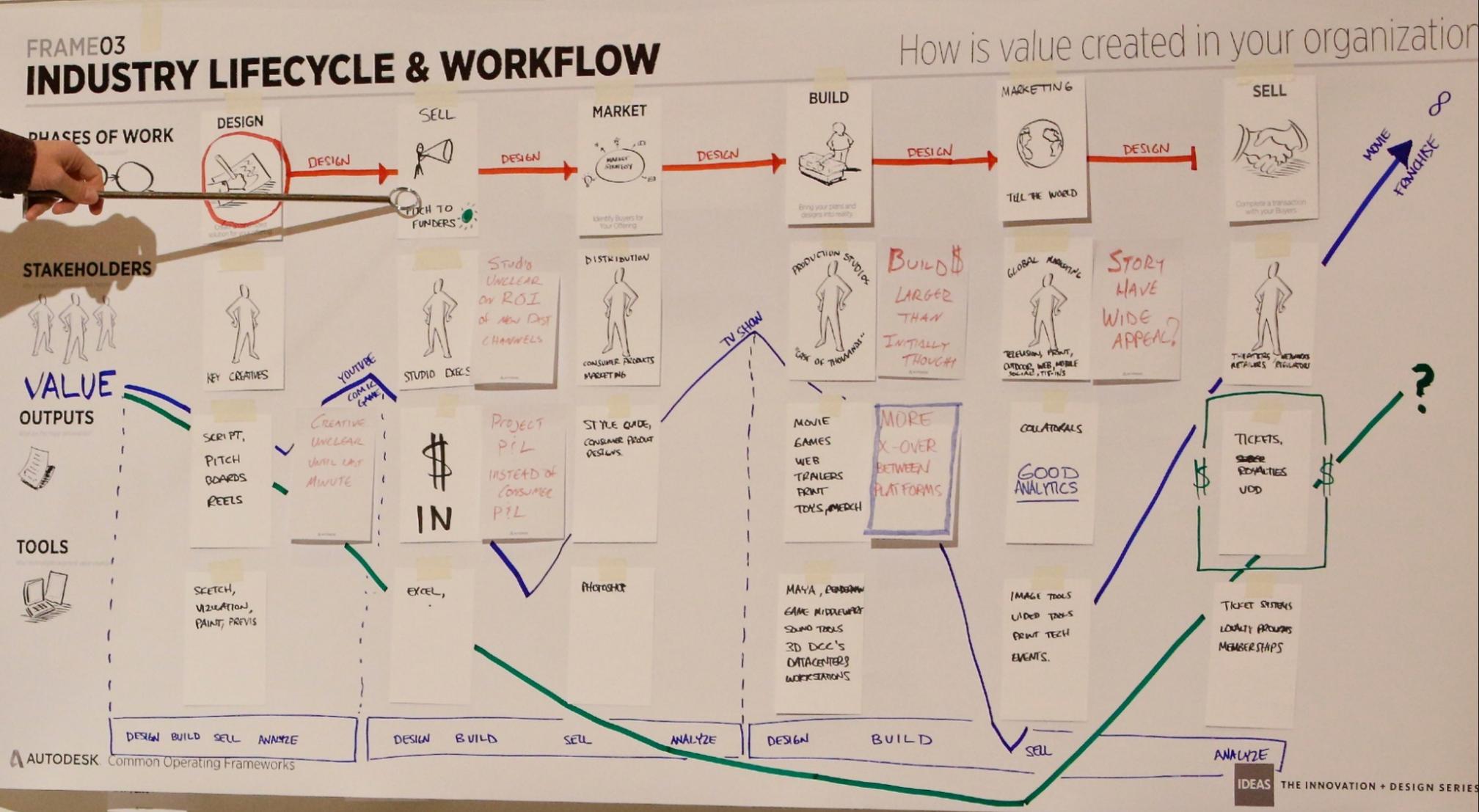
ANJESHA GROUP

LEADERSHIP

OUTCOME FOCUSED MODELS

EMPLOYEE LISTED EDUCATORS

THE INNOVATION + DESIGN SERIES



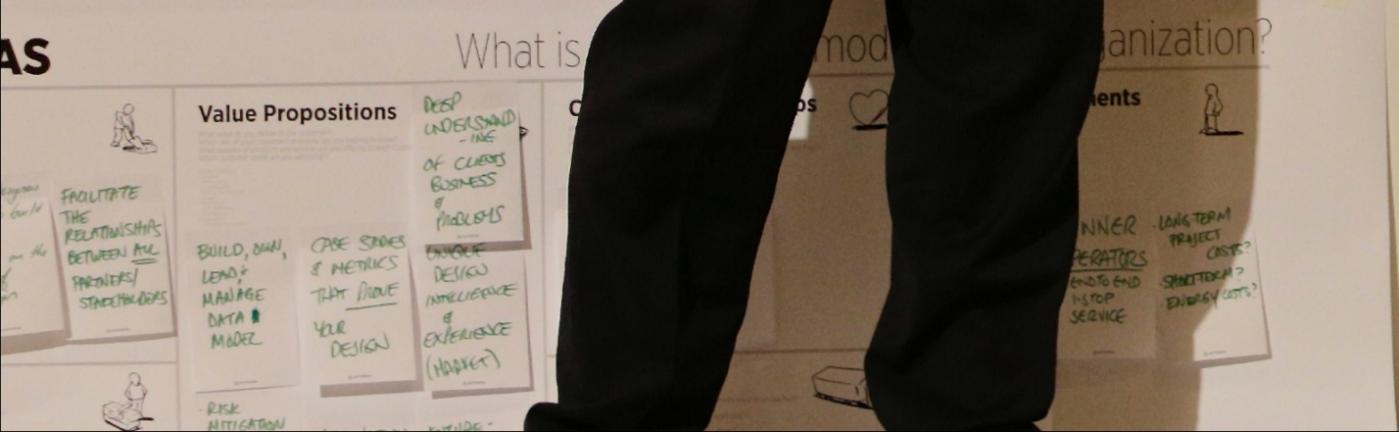
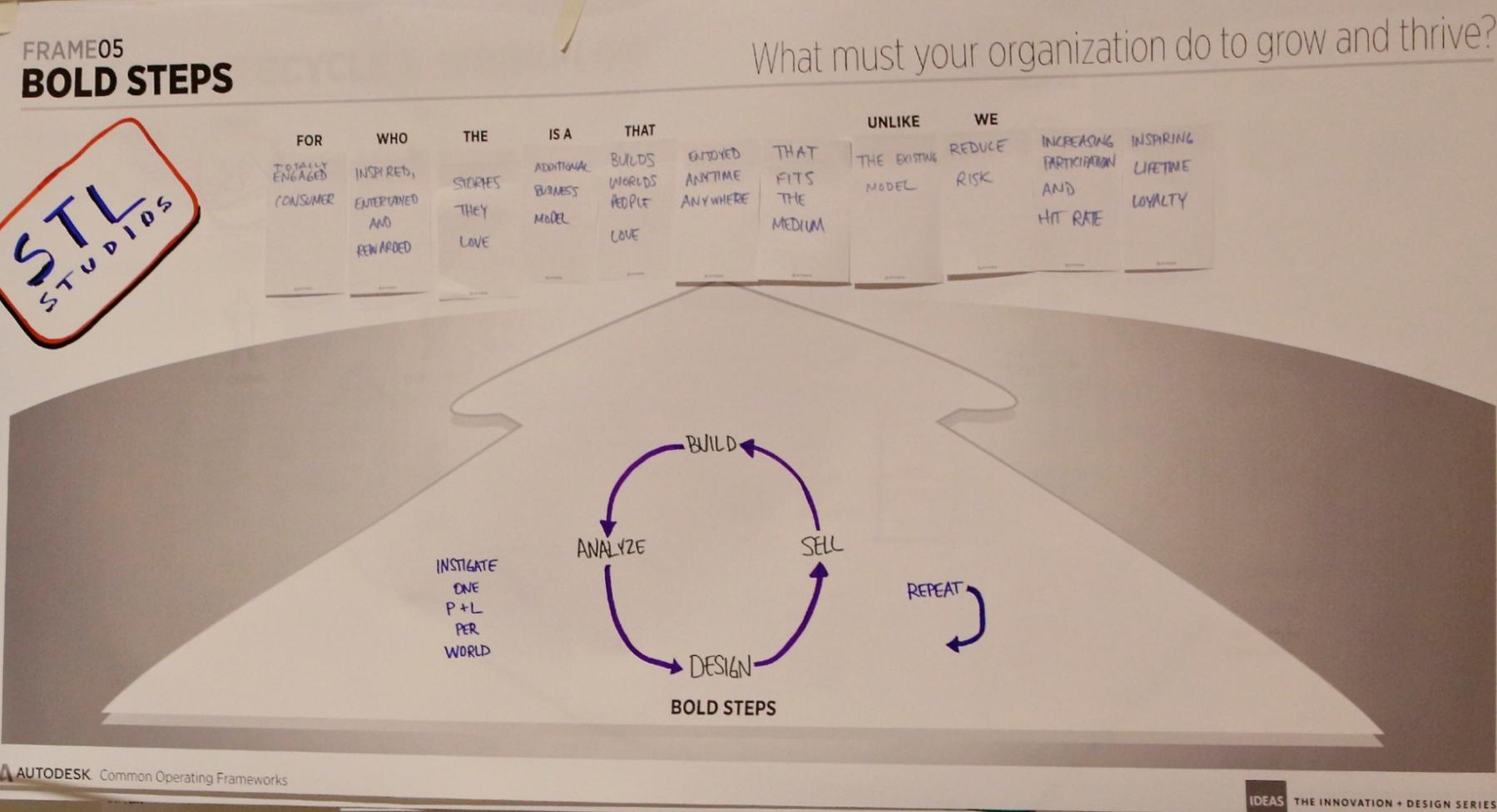
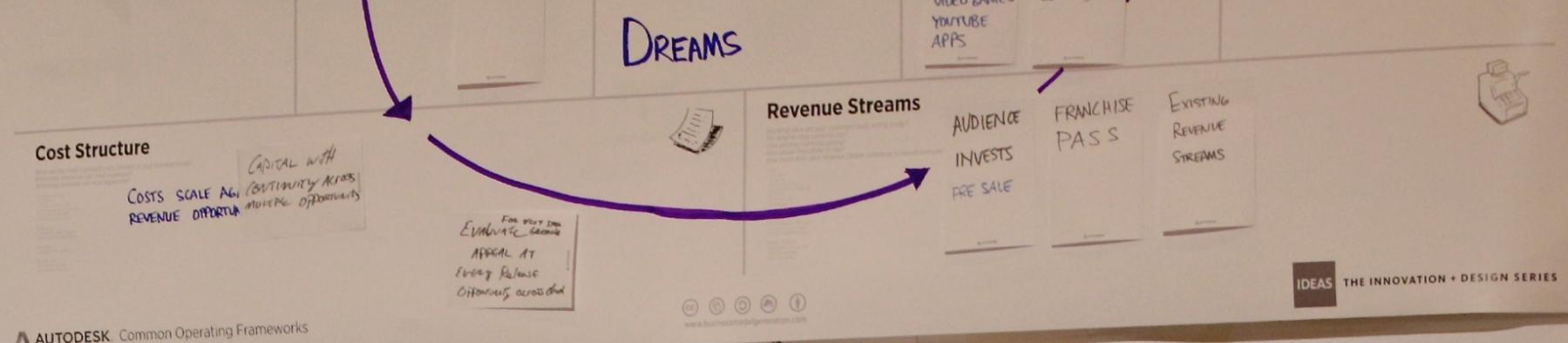
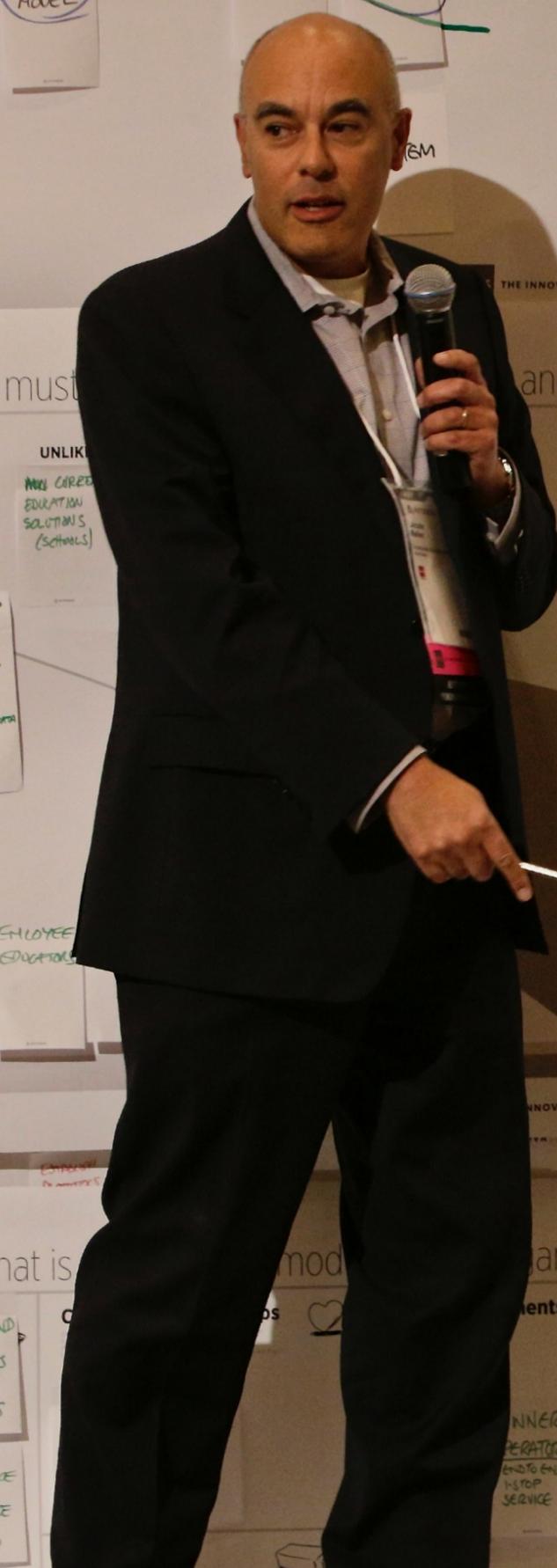
What is the business... our organization?

Customer Relationships

Customer Segments

DEEP UNDERSTANDING OF CLIENTS BUSINESS

THE INNOVATION + DESIGN SERIES





Architecture and Construction Service Providers



John
Jacobs

JE Dunn Construction
United States



Partnership Forum

Partnership Forum

HOME

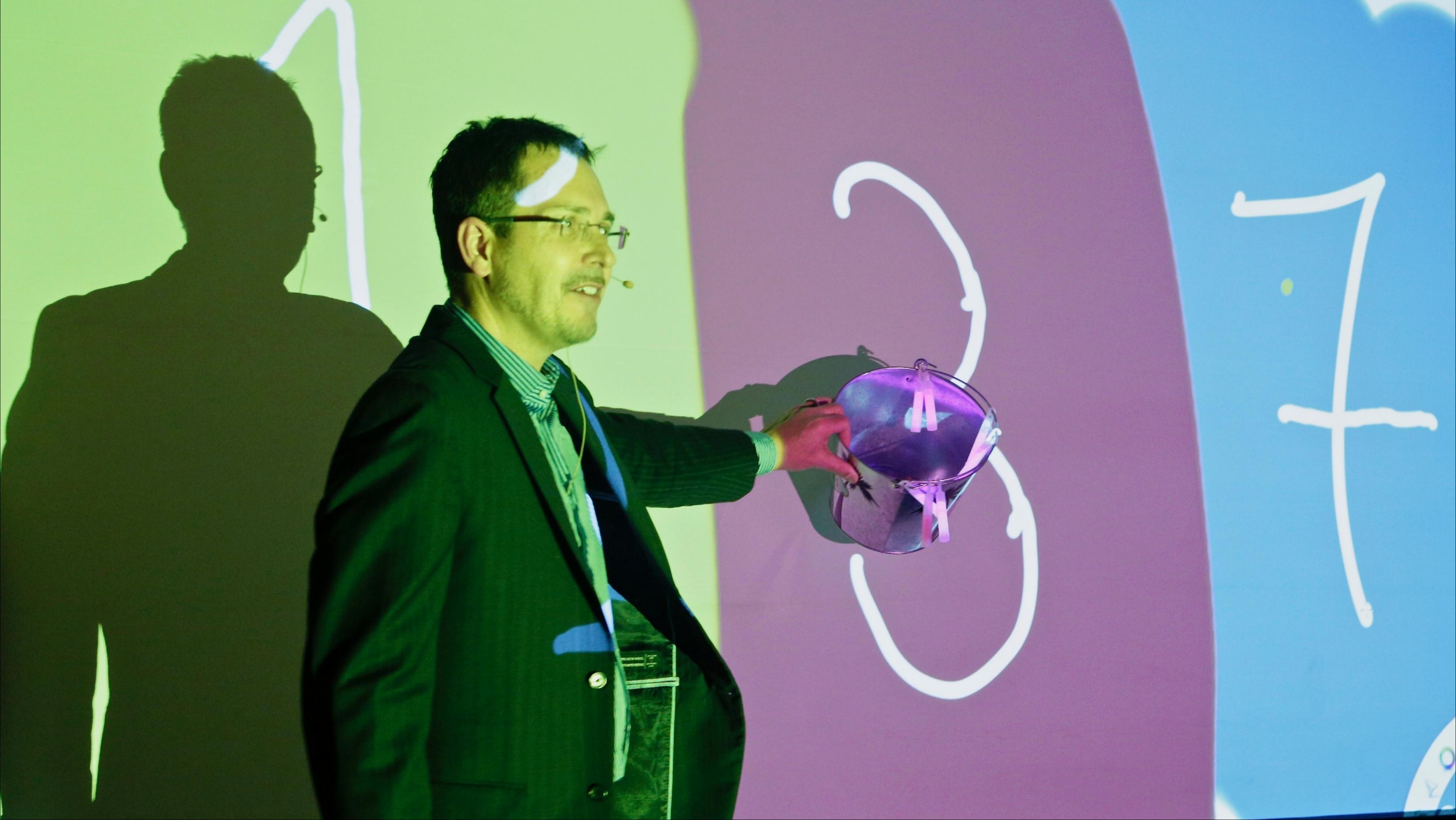
WELCOME
TO
VEGAS





Bayer Te
Germany
Leadership Forum
ENTERPRISE
PRIORITY SUPPORT
Leadership Forum

Coke



THE WINNERS - TEAM 7 A NEW ENTERTAINMENT MODEL

