



Digital Bridge Phase III Transformation Lab Executive Summary

May 24-25, 2017 – W Midtown Atlanta, Atlanta, GA





Digital Bridge Phase III Transformation Lab | Executive Summary

Statement of Purpose

One year ago, key stakeholders in the healthcare and public health community came together and agreed on a vision for multi-directional digital health data exchange to improve the health and security of the nation. This group reconvened May 24-25, 2017 to celebrate the success achieved to date, reinvigorate momentum for Digital Bridge and electronic case reporting (eCR) pilots, and align on accountability for a long-term and short-term next steps for both the program and the pilots.

AGENDA

ACT I	Explore. Align on Current State
	Welcome & Progress Made to Date
ACT II	Engage. Define What Success Looks Like
	The Future of Digital Bridge
	Envisioning Success
	ROI Model: Challenging Assumptions
	Iterate & Wrap-Up
ACT III	Ignite. Identify How to Move Forward
	Welcome & Recap of Day 1
	Identifying Use Cases
	Business Model Canvas
	Our Roadmap and the Path Forward
	Commitments & Wrap-Up

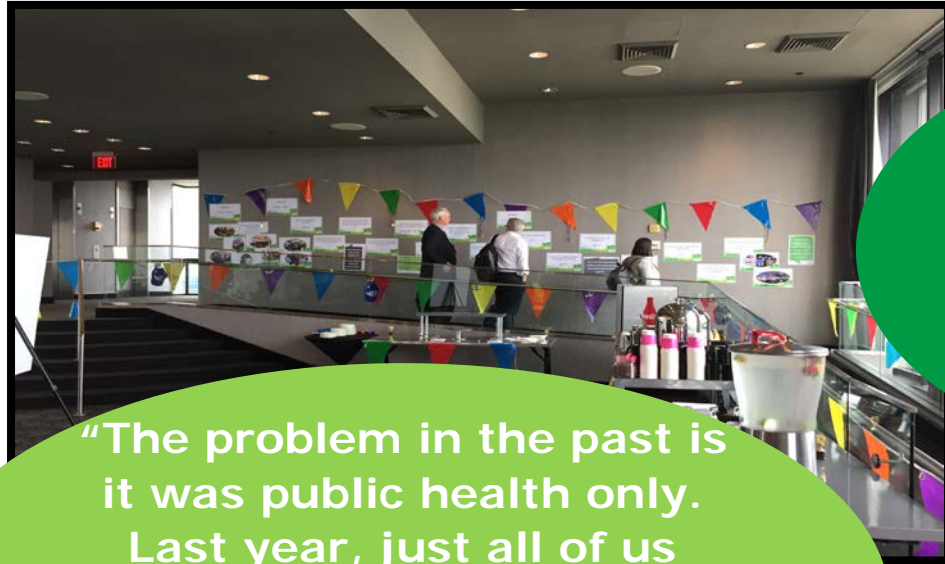
LAB PARTICIPANTS

Oscar Alleyne – NACCHO	Hilary Heishman – The Robert Wood Johnson Foundation	Richard Paskach - HealthPartners
Scott Becker – Assn of Public Health Laboratories	Richard Hornaday – Allscripts	Sam Posner - CDC
Brian Castrucci – de Beaumont Foundation	Charlie Ishikawa – Ishikawa Associates	Dave Ross – The Task Force for Global Health
Jessica Cook – Public Health Informatics Institute	Jim Jellison –Public Health Informatics Institute	Vivian Singletary – Public Health Informatics Institute
Mary Ann Cooney - ASTHO	John Lumpkin – The Robert Wood Johnson Foundation	Tom Stevenson – MIHIN
Laura Conn - CDC	Bill MacKenzie - CDC	Walter Suarez – Kaiser Permanente
James Doyle - Epic	Tushar Malhotra - eClinicalworks	Kathryn Turner – CSTE/ID Division of Public Health
Jeffrey Engel – CSTE	Pam Matthews - SHIEC	Lisa Tutterow – The Mitre Corporation
Bob Harmon – Cerner	Patrick O’Carroll – Task Force for Global Health	Patina Zarcone - Assn of Public Health Laboratories

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Act I - Explore. Align on Current State.

Participants kicked off Day 1 by exploring the "Trophy Case"- a collection of milestones and achievements over the past year- to celebrate the success and momentum of Digital Bridge to date. Participants also browsed the interview quote wall to gain a shared understanding of what colleagues in the room viewed as successes and hurdles of the past year.



"The problem in the past is it was public health only. Last year, just all of us sitting at the table talking about public health has been incredibly illuminating."

"This year has been about trust and realizing that we do need to work together."



"It's exhilarating when we get together and realize we're able to work together across the various parties."

Participants began to think through how to **leverage progress** made to-date into **long-term sustainability** and **success**.

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Act II - Engage. Define What Success Looks Like.

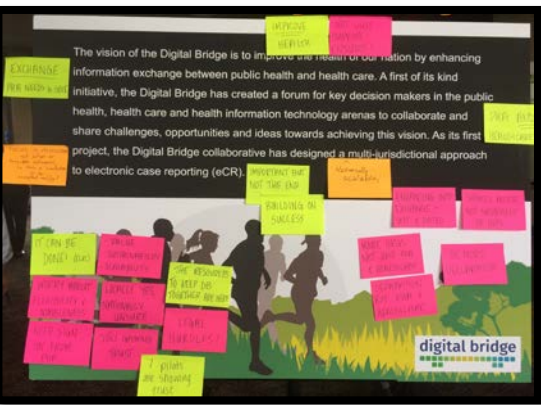
Day 1 focused on envisioning the future of Digital Bridge: What is the Digital Bridge vision? What does success look like in terms of impact? How will success be measured? Participants reaffirmed the Digital Bridge vision and determined success themes and potential metrics.

The Future of Digital Bridge

1

Participants agreed the initial vision crafted one year ago helped them get started, but they will need a **more transformational and ambitious** vision to continue to push Digital Bridge forward.

Most participants felt confident that the group will achieve the vision of Digital Bridge. It will hinge on **building trust, proving success, and creating shared access to information.**

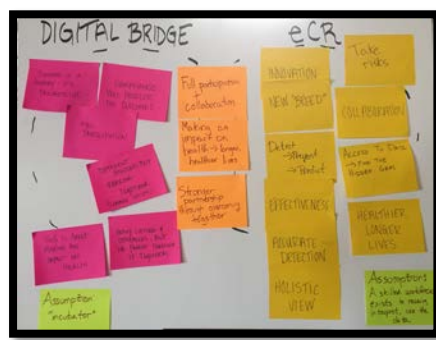


Envisioning Success

2

Common success themes were identified across both Digital Bridge and eCR and depicted within a Venn Diagram. Common threads across both included:

- Full participation and collaboration
- Making an impact on health – longer, healthier lives
- Stronger partnership through overcoming barriers together



Metrics

3

Participants also determined metrics for each of the common success themes. The metrics included:

- Participation (e.g. # of stakeholder represented)
- Partnerships (e.g. improved perception of partnership)
- Impact on Health (e.g. expansion of use cases)
- Digital Bridge Success (e.g. increased new collaborators)
- eCR Timely Detection (e.g. % increase timely reports)
- eCR Success (e.g. decreased time from case generated to PHA action)



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Act II - Engage. Define What Success Looks Like.

The team gave an overview of the Return on Investment (ROI) Model built for Digital Bridge and eCR. Participants then broke into groups to validate and challenge the data elements that the model was built on.

ROI Model: Challenging Data Elements

The use of an ROI Model to articulate value for investments in Digital Bridge and eCR became a key takeaway for the group at the end of Day 1. Pictures of the feedback templates for each group can be found in the appendix.

“

What has been your biggest ‘AH-HA!’ today?

We are finally thinking about ROI

The specificity of the benefit metrics that need to be included in the ROI model

The use of an ROI tool

We need to tightly integrate the ROI and value modeling with the eval. group

ROI is very hard work

Defining the inputs for ROI will be hard

Complexity of the ROI model and the lack of available data

The degree of work that needs to be done on arriving at a fair denominator for the ROI modeling

I was very impressed with the ROI model work done

There is a long way to go with development of the ROI model

”



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Act III – Ignite. Identify How to Move Forward.

Before determining the scope of Digital Bridge activities and responsibilities moving forward, participants explored future additional use cases by voting on criteria, use cases, and examples within the top use case to articulate the value of Digital Bridge.

Future Use Case Criteria

1

The top 2 criteria for selecting future use cases were:

1. **Addresses a leading public health problem**
2. **Helps to achieve the triple aim by drawing from public health expertise and bringing information to providers to improve population health management and improve health outcomes**

*A full list of criteria can be found in the appendix.

Potential Future Use Cases

2

The top potential future use cases were:

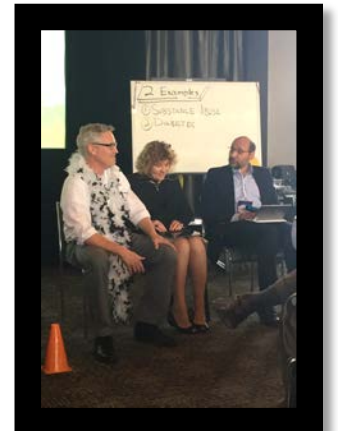
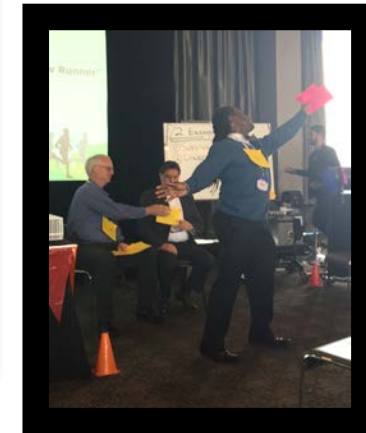
1. **Non-communicable chronic diseases (e.g., management)**
2. **Other condition-specific areas (mental health, opioid addiction)**
3. **Emergent infectious disease**

Within the top use cases participants chose **Diabetes and Substance Abuse** as examples to think through the value proposition of Digital Bridge. *A full list of potential use cases can be found in the appendix.

Use Case Examples & Value Propositions

3

Participants prioritized stakeholders for Diabetes and Substance Abuse use cases and were challenged to walk in the shoes of a stakeholder group and articulate the value proposition of Digital Bridge. Pictures of the value proposition templates can be found in the appendix.

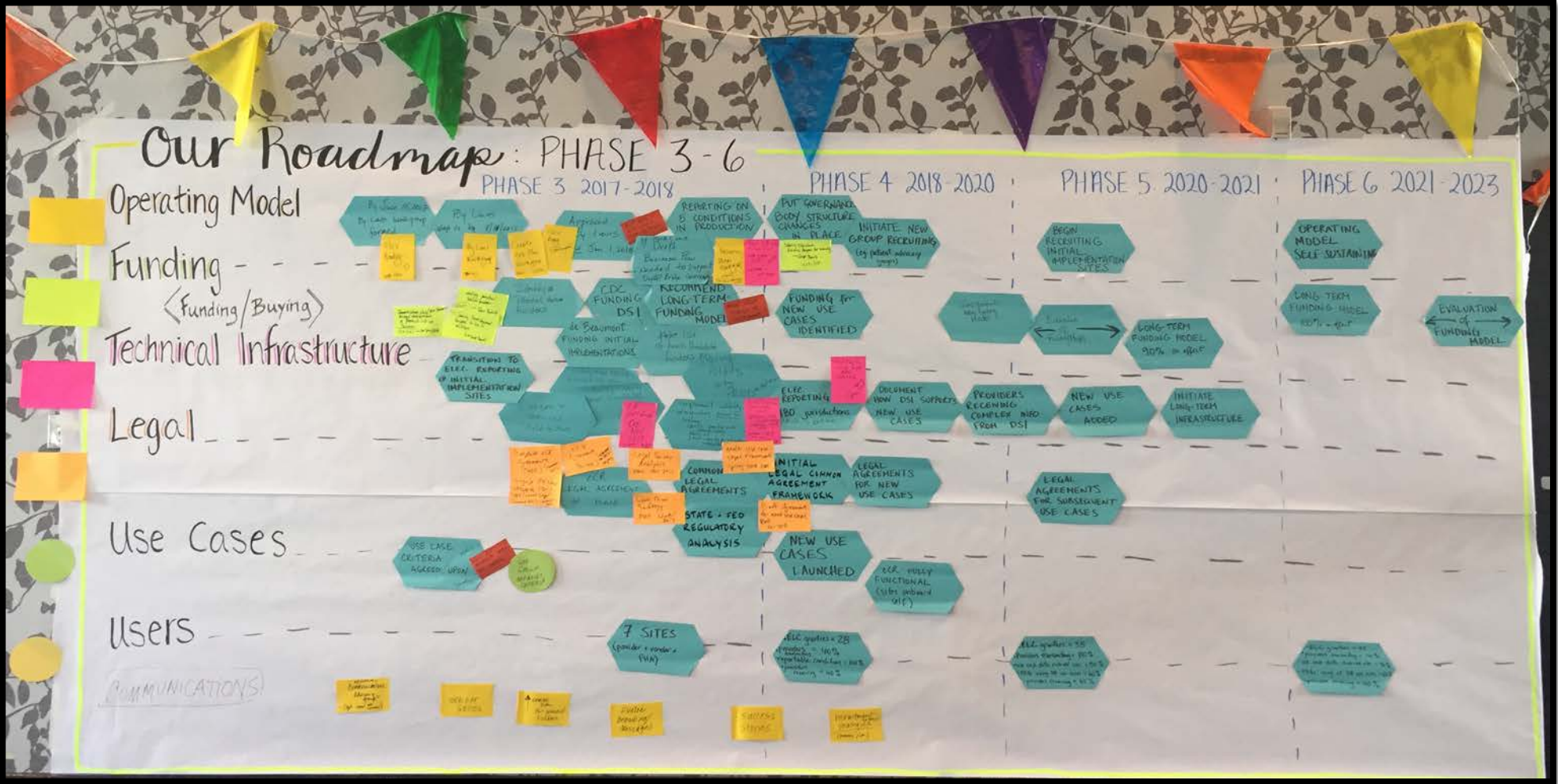


Participants realized **the value of Digital Bridge differs for each stakeholder group**, and **how they articulate that value needs to change** based on who they are interacting with.

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Act III – Ignite. Identify How to Move Forward.

Participants closed out the Lab by building out a roadmap including action items and milestones through the end of 2018 for several workstreams, including: Operating Model, Funding (Funding/Buying), Technical Infrastructure, Legal/Policy, Use Cases, and Users of Bidirectional Information.



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Act III – Ignite. Identify How to Move Forward.

Participants closed the day by sharing their commitment to move Digital Bridge and eCR forward.

Commitments & Wrap Up

“It has been said that a vision without a plan is just a dream. We have a dream AND we have a plan. We will get this done!”

- Dr. Lumpkin



Raw Lab Output

A walkthrough of the lab day, captured in photos and module activities

The section that follows will contain images capturing the flow of the day and completed smartboard templates.

Trophy Case Timeline

Trophy Case Timeline

PHASE I – 6/14/16 – 8/4/16

- Greenhouse Meeting – June 2016 (important agreements were made on the vision, rough timeline for the next 18 months, and commitments from each group)

PHASE II – 8/5/16 – 2/6/17

- Governance Body Formed – 8/5/16
- Pre-Implementation eCR Requirements Workgroup artifacts (Business Process Matrix, Task Flow Diagram, eCR Functional Requirements, eCR Process Notes) approved by the Governance Body – 1/19/17
- Pre-Implementation Technical Architecture artifacts (Conceptual Architecture Diagram, Technical Architecture Diagram Narrative, eICR Trigger Sequence Diagram) to fulfill the requirements approved by the Governance Body – 1/19/17
- Pre-Implementation Sustainability Workgroup artifacts (Initial Implementation Site Questions, Preliminary Sustainability Plan) approved by the Governance Body – 1/19/17
- In Person Technical Architecture WG Meeting – 11/30/16 – 12/1/16
- In Person Governance Body Meeting – 1/18/17 – 1/19/17
- Initial Implementation Sites Selected by Governance Body – 2/16/17
- Conference Presentations – Public Health Informatics Conference (8/21/17-8/24/17), AMIA Annual Symposium (11/12/16-11/16/16)

PHASE III – 2/17/17 – PRESENT

- Site Waves Selected – 3/9/17
- Technical Implementation Taskforce Chartered – 4/6/17
- Strategy Workgroup Chartered – 4/6/17
- Evaluation Workgroup Chartered – 4/6/17
- Techno-Legal Tiger Team Chartered – 5/4/17
- Calls with Initial Implementation Sites Kicked Off – 3/2/17
- Conference Presentations – HIMMS 2017 (2/9/17-2/23/17), Datapalooza 2017 (4/28/17)

Interview Quotes

- “All the stakeholders that have invested in it is encouraging. I haven’t seen that **level of commitment and participation** with other public health initiatives up to this point.”
- “This year has been about **building trust** and realizing that we do need to work together.”
- “Any skepticism is being driven by sustainability; **how do we go beyond a pilot?**”
- “**Sustainability** is a huge issue and depends on what the mandates are; can this ultimately save money and do good for PH?”
- “**Funding** will be finite in relationship to the amount of time.”
- “My biggest concern was that we were creating a **digital chasm**, a significant space/disparity between development of clinical care and the infrastructure of public health where we would still need to send them a fax.”
- “We’re **moving quickly** which is a good thing, but we’re also running into the reality of how much time it takes to work with standards and support them from the vendor development side and health provider implementation side.”
- “While it was something we all committed to, it had an impact on our ability to time manage and execute with factors in life we experience.”
- “If physicians don’t like it, they’re not going to use it.”
- “**Success creates opportunities**. If we can build upon the success of notifiable conditions, those groups who don’t see immediate benefits from this arrangement can see that this group has been able to address some thorny issues.”
- “The real business proposition for maintaining Digital Bridge rides around issues bigger than reportable disease conditions.”
- “By attacking critical issues that are seen to be high value by all parties in this, people will come, and then more traditional funding sources will follow.”
- “The problem **in the past is it was public health only**. Last year, just all of us sitting at the table talking about public health has been incredibly illuminating.”
- “It’s exhilarating when we get together and realize we’re able to work together across the various parties.”
- “One of the things that’s important to me is that **we’re starting to gel as a group**.”
- “Starting to think about **other use cases** that can have similar architectures so that we can build one way for the clinical world to interact with public health – that way we can get more buy-in from the clinical world and funding.”
- “Sustainability is that we create an entity that can function on its own.”
- “I want to make sure we do it right and don’t rush to get it done.”
- “Due to the deadlines and what we hoped to achieve, we’ve had to go at a **frenetic speed**. These pressure points and mile markers had to occur if we expected to make this work.”
- “Prioritizing time for this over other projects has led to a lot of sacrifice on other things.”
- “What health care is getting out of this is there’s a reduction in burden. It’s a burden which many health care providers haven’t really noticed because they don’t comply.”
- “Customers have other options to check the box to meet the requirements. Customers haven’t been that vocal about adopting eCR. We’re not going to develop an interface if we feel our customers aren’t going to use it.”
- “We’ll have to have **physician and customer buy-in**. They’re going to be the ones driving it. They’ll have to see the value in it and perhaps better outcomes.”

Wordle: Key Emotions from Pre-Greenhouse Interviews



Vision Statement

The vision of the Digital Bridge is to improve the health of our nation by enhancing information exchange between public health and health care. A first of its kind initiative, the Digital Bridge has created a forum for key decision makers in the public health, health care and health information technology arenas to collaborate and share challenges, opportunities and ideas towards achieving this vision. As its first project, the Digital Bridge collaborative has designed a multi-jurisdictional approach to electronic case reporting (eCR).

IMPROVE HEALTH
NOT JUST IMPROVE - ENSURE!

EXCHANGE - PHA NEEDS to GIVE

PHA AND HEALTHCARE

Focus is discussion not action or tangible outcomes. Is this a limitation or an accepted reality?

IMPORTANT BUT NOT THE END

Nationally scalable,

BUILDING ON SUCCESS

ENHANCING INFO EXCHANGE - SOFT & DATED

SHARED ACCESS, NOT MOVEMENT OF INFO

IT CAN BE DONE! (ELR)

- VALUE
- SUSTAINABILITY
- SCALABILITY

THE RESOURCES TO KEEP DB TOGETHER ARE HERE

WORRY ABOUT FLEXIBILITY & NIMBLENESS

LOCALLY YES, NATIONALLY UNSURE

MORE ORGS NOT JUST PHA & HEALTHCARE

BE MORE DECLARATIVE

NEED SIGN-ON FROM PHA

STILL GAINING TRUST

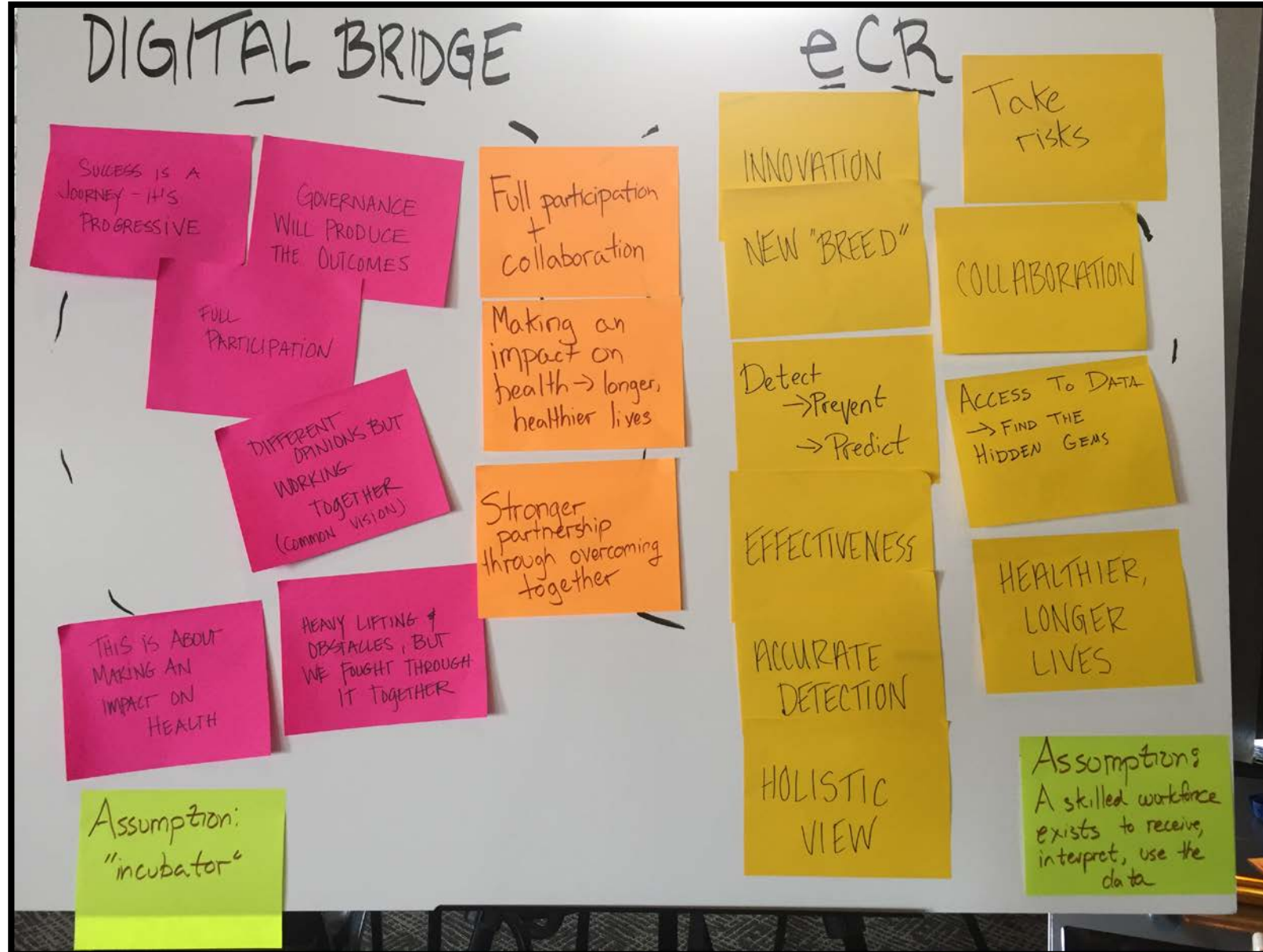
SEPARATION B/T PHA & HEALTHCARE

LEGAL HURDLES?

7 pilots are showing trust

digital bridge

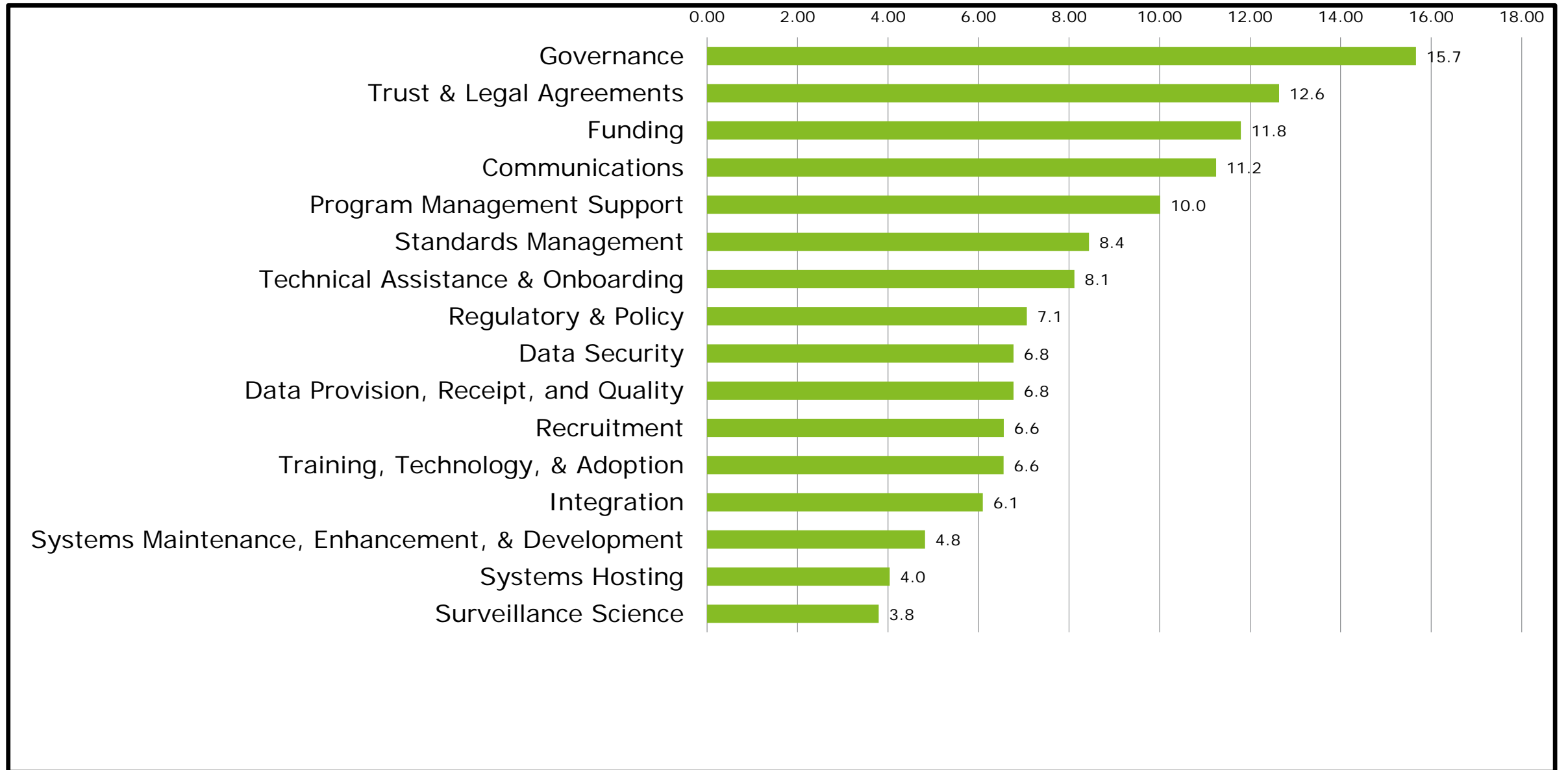
Envisioning Success: eCR and Digital Bridge Themes



Wordle: Day 2 – A-Ha’s



Business Model Canvas – Key Activities Voting



Return On Investment Model

INVESTMENTS – PUBLIC HEALTH

I like...	I wish...	What if...
Public health investments are more visible to the public	Invest in public health investments that are more visible to the public	What if public health investments were more visible to the public?
Public health investments are more visible to the public	Invest in public health investments that are more visible to the public	What if public health investments were more visible to the public?

Achilles' Heel

Public health investments are more visible to the public

RETURN – PUBLIC

I like...	I wish...	What if...
Public health investments are more visible to the public	Invest in public health investments that are more visible to the public	What if public health investments were more visible to the public?
Public health investments are more visible to the public	Invest in public health investments that are more visible to the public	What if public health investments were more visible to the public?

Achilles' Heel

Public health investments are more visible to the public

INVESTMENTS – PROVIDER

I like...	I wish...	What if...
Public health investments are more visible to the public	Invest in public health investments that are more visible to the public	What if public health investments were more visible to the public?
Public health investments are more visible to the public	Invest in public health investments that are more visible to the public	What if public health investments were more visible to the public?

Achilles' Heel

Public health investments are more visible to the public

RETURN – PROVIDER

I like...	I wish...	What if...
Public health investments are more visible to the public	Invest in public health investments that are more visible to the public	What if public health investments were more visible to the public?
Public health investments are more visible to the public	Invest in public health investments that are more visible to the public	What if public health investments were more visible to the public?

Achilles' Heel

Public health investments are more visible to the public

RETURN – VENDOR

I like...	I wish...	What if...
Public health investments are more visible to the public	Invest in public health investments that are more visible to the public	What if public health investments were more visible to the public?
Public health investments are more visible to the public	Invest in public health investments that are more visible to the public	What if public health investments were more visible to the public?

Achilles' Heel

Public health investments are more visible to the public

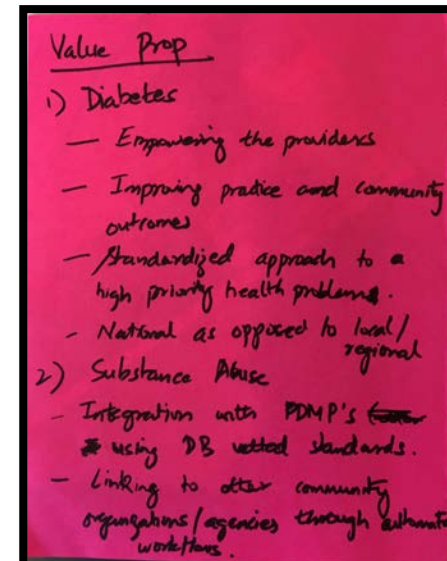
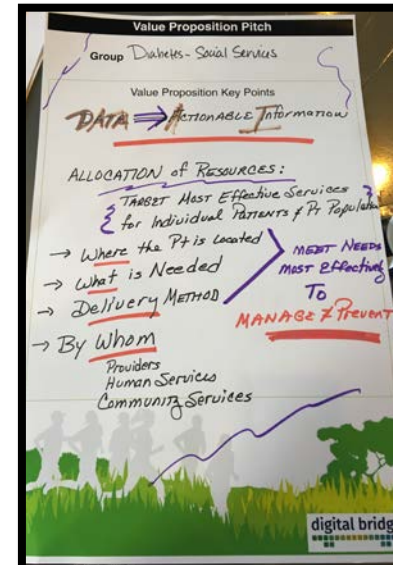
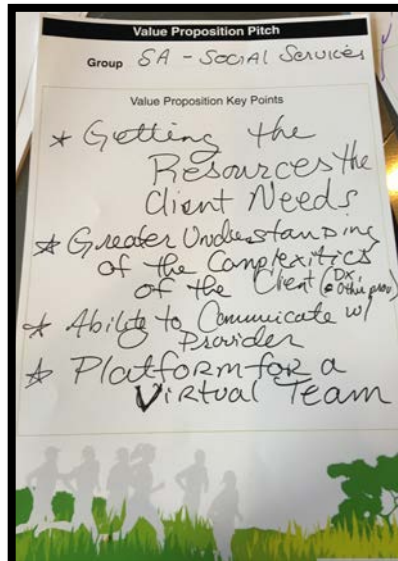
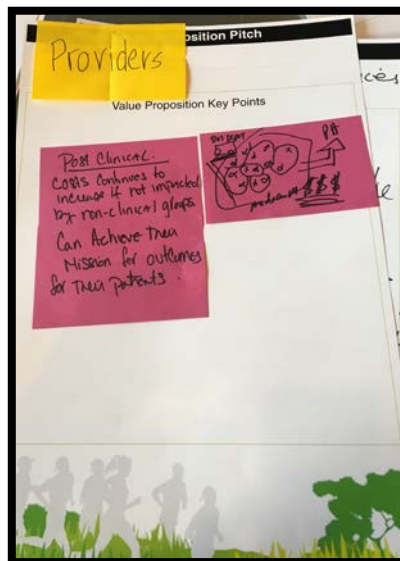
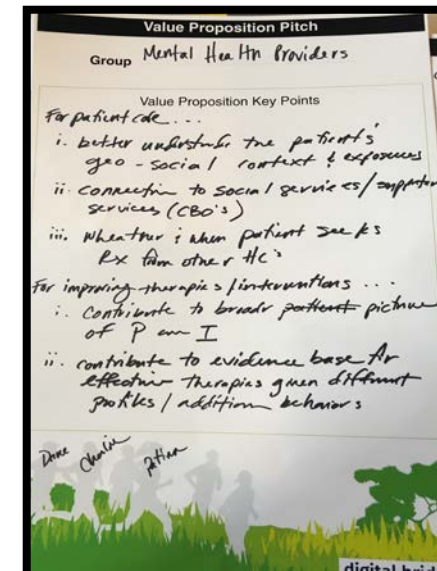
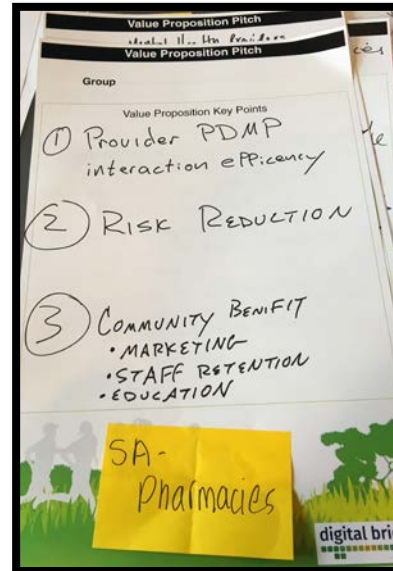
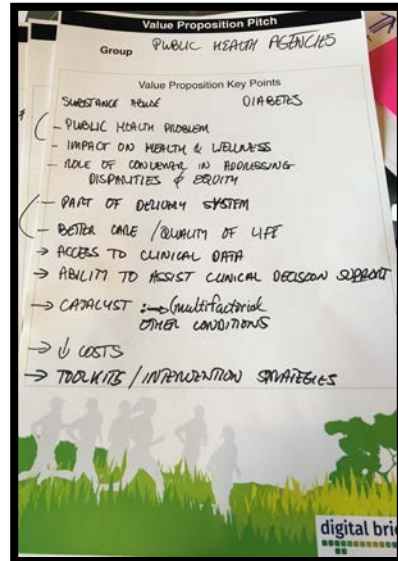
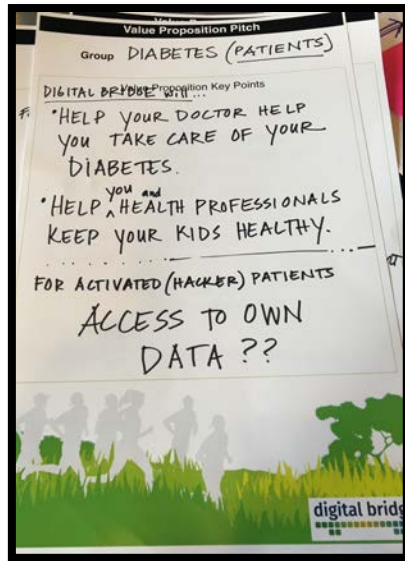
INVESTMENTS – VENDOR

I like...	I wish...	What if...
Public health investments are more visible to the public	Invest in public health investments that are more visible to the public	What if public health investments were more visible to the public?
Public health investments are more visible to the public	Invest in public health investments that are more visible to the public	What if public health investments were more visible to the public?

Achilles' Heel

Public health investments are more visible to the public

Value Proposition Templates



Future Use Case Criteria & Prioritization

Final list of criteria, in voting order

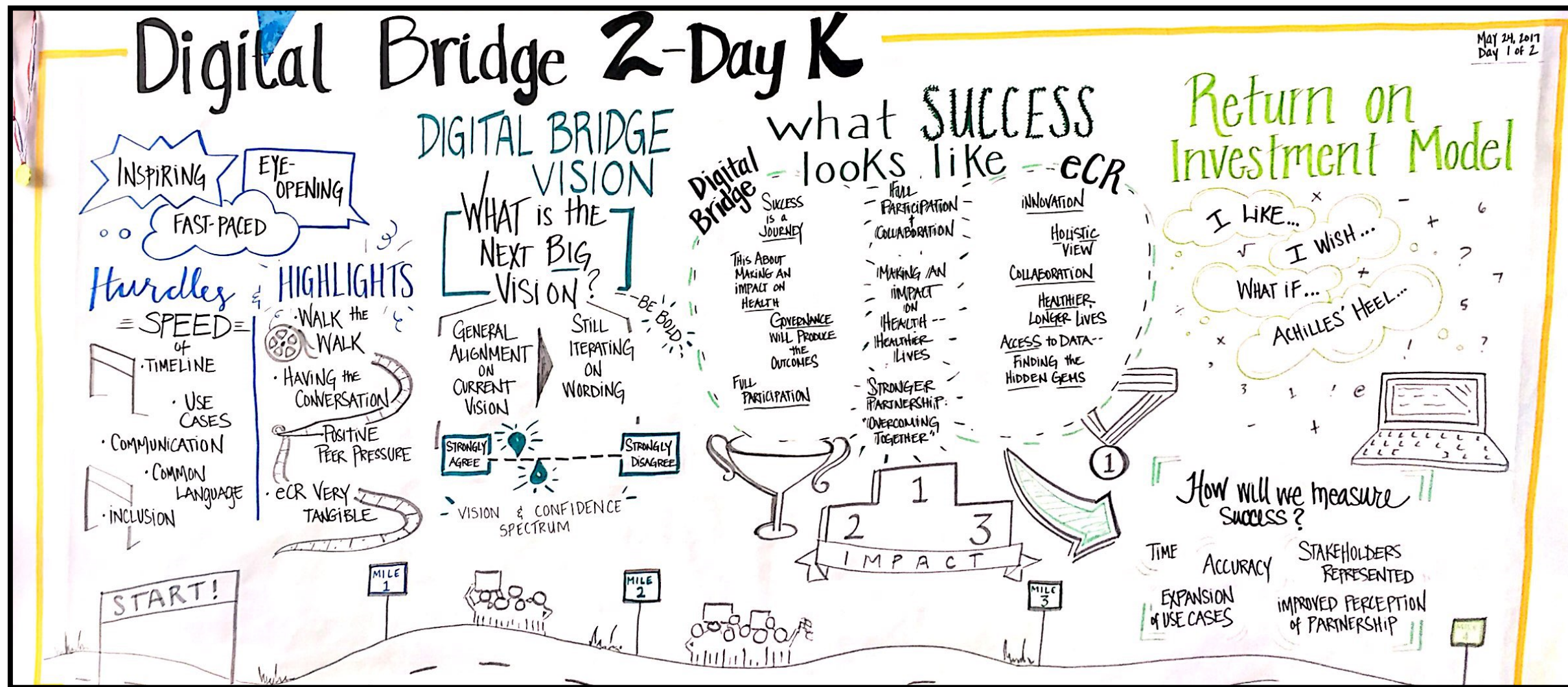
Instruction: Allocate 100 points across the 17

Addresses a leading public health problem	16.62
Help to achieve the triple aim by drawing from public health expertise and bringing information to providers to improve population health management and improve health outcomes	12.88
Solve a problem that uses standards and drive toward standards-based solutions	8.46
Be a project we can accomplish and get done (i.e. feasibility, scale and scope)	7.85
Improve the efficiency, timeliness, and completeness of information exchange	7.42
Be driven by provider request	6.5
Address urgent matters (e.g., Zika or pandemic flu)	6.12
Focus on the gaps, avoid duplication with other efforts, and align with ongoing projects that may or may not be part of Digital Bridge; Leverages existing infrastructure and data sources (as much as possible)	5.81
Explore areas that allow, improve, and enhance bidirectional communication and exchange of non-traditional data and social determinants of health	4.96
Help improve and benefit from coordination, collaboration, and alignment between all partners	4
Use data to improve population health in a measurable fashion	3.92
Have nationally relevant implications	2.96
Have the ability to converge data from disparate sources to provide a more complete picture	2.58
Be driven by public health request	2.38
Addresses a current political priority	2.15
Address issues that can be solved by technology	1.35
Increase the providers' ability to cope with the foreseeable conditions	0.19

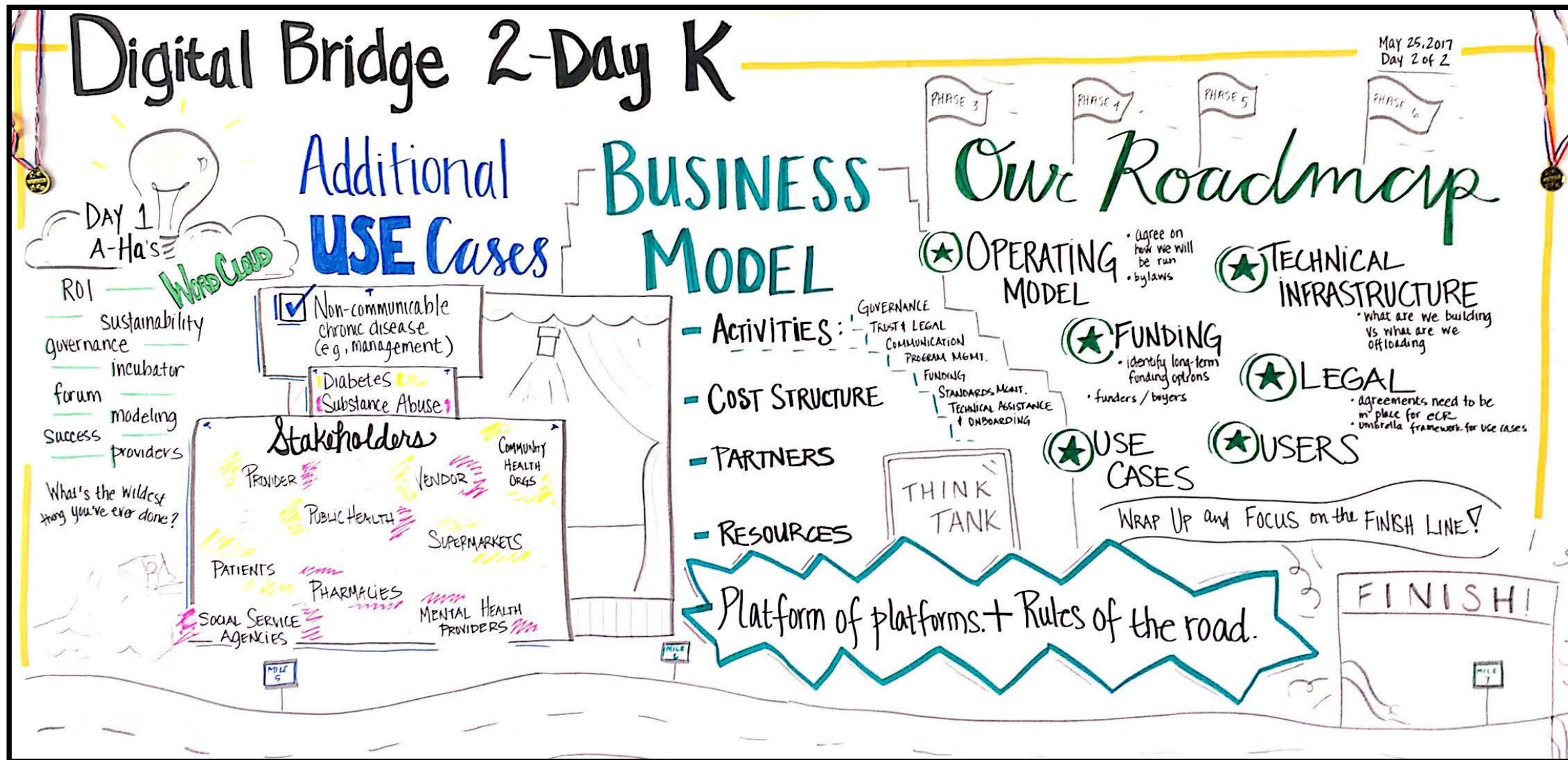
Potential use cases

Ranked from largest to smallest by Product, which is the result of multiplying the two criteria (each evaluated 1 to 4). Product could range from 1 to 16 (4x4)..

Heat Map	Addresses a leading public health problem	ACHIEVE THE TRIPLE AIM BY (A) DRAWING FROM PUBLIC HEALTH EXPERTISE AND (B) BRINGING INFORMATION TO PROVIDERS TO IMPROVE (1) POPULATION HEALTH MANAGEMENT AND (2) HEALTH OUTCOMES	Product
3 Noncommunicable (chronic) diseases (e.g., management)	3.72	3.72	13.84
4 Other condition-specific areas (mental health, opioid addiction, etc.)	3.28	3.32	10.89
8 Emergent infectious disease	3.24	3.2	10.37
1 Newborn case management (birth defects, registration, case management, etc.)	2.8	2.64	7.39
7 Public health registries (cancer and chronic disease, etc. -- not a clinical registry)	2.72	2.64	7.18
5 Immunization registry	2.64	2.52	6.65
2 Vital records reporting	2.36	2.12	5
6 Syndromic surveillance	2.28	2.08	4.74



Graphic Capture: Day 2



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