

“Of all the forms of inequity, injustice in health care is the most shocking and inhumane.”

– Dr. Martin Luther King



DHIT's Vision:

A world without health inequities

DHIT's Mission:

To maximize health in communities across the nation and beyond by providing equal access to global advancements in care

DHIT's Strategy:

- ➔ Focus on the most costly and impairing health issues in under-resourced communities;
- ➔ Diffuse human-centered design and agile methodologies;
- ➔ Utilize public libraries and community centers as "place of service" for health engagement and education;
- ➔ Build a culture of innovation and digital transformation within organizations and communities;
- ➔ Amplify the opportunities for cross-collaboration amongst global industry partners and under-resourced communities; and
- ➔ Leverage a global supply chain of talent and technologies to service community transformation.

DHIT's Approach:

Community. It is a notion that binds us all together as humans. Members of a community have a shared sense of trust, belonging, safety and empathy. They have an individual and collective sense that they can positively influence and impact their environment and each other.

At DHIT, we embrace the values of community. We exist to serve the disenfranchised, to bring hope where there is despair, to bring compassion where there is suffering and pain.

We do this by bringing together 21st century resources, experts and passionate entrepreneurs to address some of the biggest health problems and disparities affecting our communities today. The result is to accelerate the pace of change and to drive health equity for individuals and their communities.

It starts with training Health Architects, a next-generation workforce supporting individuals and communities in achieving personalized health. They are experts in human-centered design and in building trusted relationships with individuals and communities, which lead to the collection of critical data and insights that drive optimal health.

To augment the Health Architect, DHIT deploys a cloud data infrastructure called the Health Utility Grid (HUG), that houses and protects the data and insights collected, creating a rich database for research understanding and clinical delivery leading to continuous health improvement. The Health Utility Grid is powered by machine learning and artificial intelligence to enable personalized public health interventions across each individual and community.

At a community level, the Health Architect and HUG collect as much data on the community as possible including demographic, environmental, socioeconomic, and health-related data. At an individual level, they collect data for individuals who reside within a given community, including demographic, psychographic, genomic, in addition to health-related data.

This rich database will power a global marketplace of validated solutions that map to individuals, households and communities. *An eHarmony for Health*, where global supply meets local need.

At DHIT, we are driven to transform communities by supporting individuals to reach and maintain a healthy life.

These are the essential components required to power the health system of the future where incentives are aligned, access is open, costs are affordable, and outcomes are optimized.

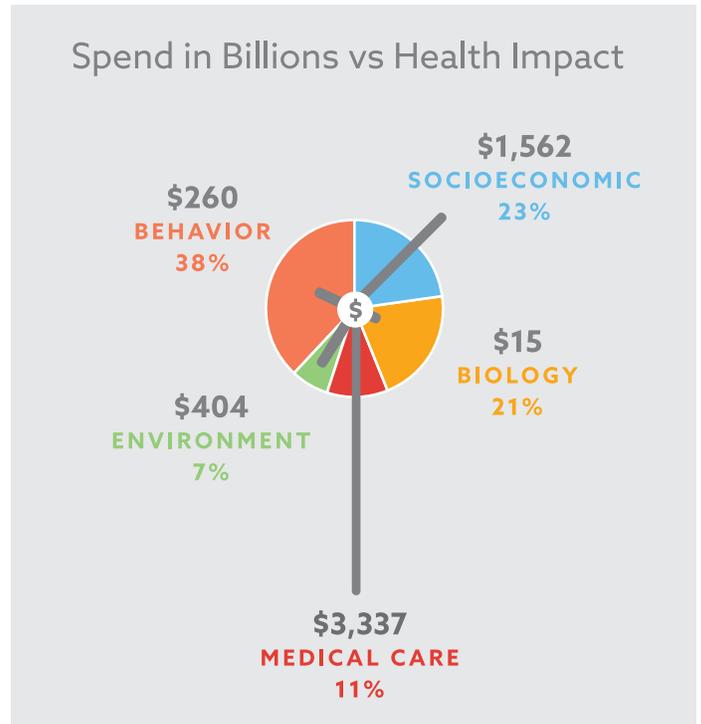
The Problem

The \$3.2 trillion US healthcare system fails to provide an easy-to-understand, easy-to-use, and unbiased model to serve all people based on the attributes and characteristics of *who* they are and not *what* condition they have, as defined by the current commercially oriented payment system. The World Health Organization (WHO) estimates that only 11% of a patient’s health can be attributed to the healthcare services they receive, but these services have been the primary focus of policy legislation, such as the Affordable Care Act, and recent payment changes by the Centers for Medicare-Medicaid Services, as the healthcare system has shifted from a volume-based payment model to incorporate value-based payments.

As indicated by the chart on the right, *who* a person is drives 89% of the determinants of their health, but focusing on *what* conditions they have can only drive 11% value to the individual. This means that we are spending our resources and our attention on a system that currently only impacts our lives in very limited ways, hence the common description of our healthcare system as a “sickness” system.

To truly transform the healthcare system and focus on improving all the determinants of an individual’s health, we must establish an operating model that creates the necessary resources and systems around an individual to support them in living their best lives – to support their *who* and not their *what*.

The World Health Organization estimates that only **11%** of a patient’s health can be attributed to the healthcare services they receive.



Source: DeterminantsOfHealth.Org

89% of health occurs outside of the clinical space through our genetics, behavior, environment and social circumstances.

The US spends over **\$3 trillion** annually on medical care, which is more than the other four categories combined (\$2 trillion) despite the fact that it only accounts for 11% of impact.

The US spends **12 times more** to address medical care than we do to address individual behavior, even though it has only quarter of the impact.

To truly transform the healthcare system and focus on improving all the determinants of an individual's health, we must establish an operating model that creates the necessary resources and systems around an individual to support them in living their best lives — to support their *who* and not just their *what*.

Summary of Implications:

- ➔ Many factors combine to affect the health of individuals and communities. Whether people are healthy or not is determined by their circumstances and environment. To a large extent, factors such as where we live, the state of our environment, genetics, our income and education level, and our relationships with friends and family all have considerable impacts on health, whereas the more commonly considered factors such as access and use of healthcare services, often have less of an impact.
- ➔ We are spending our resources and our attention on a system that currently only impacts our lives in very limited ways.
- ➔ To truly transform the healthcare system and focus on improving all the determinants of an individual's health, we must establish an operating model that creates the necessary resources and systems around an individual to support them in living their best lives — to support their *who* and not just their *what*.
- ➔ Using our immersive innovation and transformative approach, we will help solve for real health determinants by engaging in problem blueprinting to answer the following questions prior to solution matching or creating more technology for commercial sake versus actual need:
 1. **Where is the problem?**
 2. **Who is suffering from the problem?**
 3. **What is causing the problem?**
 4. **What are the barriers to solving the problem?**
 5. **What are the gaps and opportunities?**

The Theory of Change

DHIT's theory of change is based on the premise that to democratize and improve access and affordability to healthcare, a new model of companionship and stewardship is necessary.

In accordance with the World Health Organization, DHIT will create a model that utilizes a steward who takes the lead in identifying needs and constraints within a system, creates a specific plan to overcome challenges, then delegates responsibility to lower levels and finally follows through to ensure that each service reaches its intended audience.

Specifically, this model involves the implementation of the following strategies:

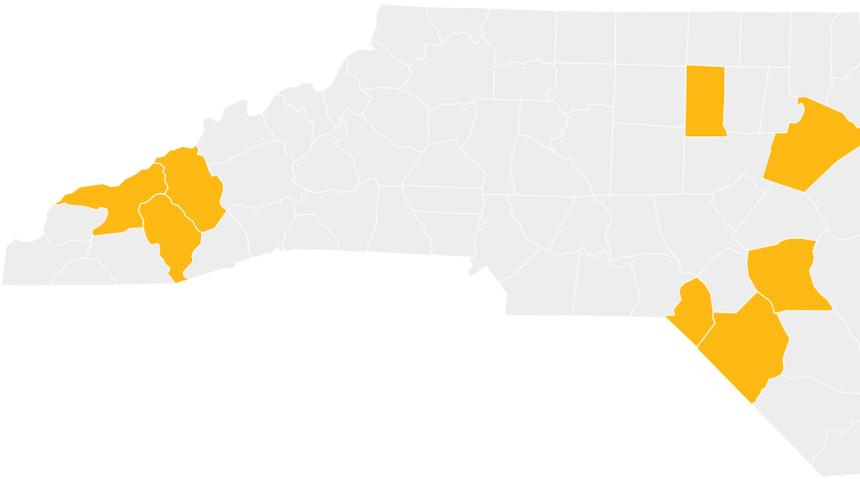
COMPANIONSHIP involves a trained and certified Health Architect who will be available to assist individuals within the population with their specific health needs. By forming and nurturing relationships on an individual basis, we will build the trust necessary to rapidly diffuse our operating model.

STEWARDSHIP involves understanding the needs of each population and then delivering the right service(s) at the right time appropriate for that local culture. In the latest World Health Report, WHO called stewardship one of the four key functions of a health system – one that has a profound effect on the other three (service provision, resource generation, and financing) which is the reason we are making it, along with human companionship, the core of our diffusion strategy.

The Solution

The **DHIT Community HUG** is a first-of-its-kind 21st century infrastructure servicing disenfranchised communities through an immersive operating model that utilizes the public library and community centers. This model will provide new insights that will drive improved health outcomes for individuals in the communities in which they live.

Upon securing the required funding, in partnership with UNC Pembroke College of Health Sciences and the Center for Applied Genomics and Precision Medicine at Duke University, DHIT will launch its social innovation operating model in the most underserved counties in North Carolina.



DHIT's Goals:

- **Cultivate trust throughout the community through engagement events:** Conduct discovery sessions with community representatives to define and prioritize the public health issues to address first; establish trust in the community through DHIT engagement events housed in the public libraries and community centers across each county. For example, DHIT will partner with local organizations like The Robeson County Arts Council and Lumberton High School Chorus to bring arts, music and families together to introduce Health Architects and drive awareness and understanding of the DHIT Community HUG.
- **Provide education and training through the local college system:** Build a certified talent stream of DHIT Health Architects out of UNC Pembroke College of Health Sciences who can service each county to collect social, environmental and behavioral determinants of health at an individual and household level.
- **Deploy an evidenced-based clinical decision program:** Utilizing a state-of-the-art clinical decision support platform out of Duke's Center for Applied Genomics and Precision Health called MeTree, Health Architects will be able to analyze personal history on diet, exercise, smoking, and other clinical data to provide support to patients and care providers for a wide variety of conditions and diseases.
- **Conduct an Innovation Sprint to co-develop solutions:** DHIT Health Architects will facilitate purposeful collaborations throughout each community leading to co-development opportunities through DHIT's Digital Health Innovation Sprint, a standardized and facilitated innovation framework to test, implement, monitor/evaluate and then iterate public health campaigns and interventions.

DHIT's Outputs:

- **48 DHIT Health Architects** trained at UNC-Pembroke and deployed through the Public Library.
- **3 Health Utility Grids** deployed, managed and governed across public libraries within Robeson, Cumberland, and Scotland counties.
- **1,050 community participants** onboarded onto the HUG and their family health history mapped using MeTree.
- **300 researchers, public health officials, and care providers** leveraging data and insights from the HUG.
- **5 multidisciplinary teams of entrepreneurs, innovators and industry partners** to participate in an Innovation Sprint.

DHIT's Outcomes:

- ➔ **EDUCATION** – DHIT's Health Architects will increase awareness and understanding of the determinants of health that affect an individual's health, driving a high level of self-accountability and actionable insights to support individual change.
- ➔ **RESEARCH** – DHIT's Health Utility Grid will increase access to real-world data for public health officials and researchers that drives a greater understanding of who an individual is and thus allows for more effective testing and validation of new care models and interventions.
- ➔ **QUALITY** – DHIT's MeTree platform will improve health outcomes by directing the appropriate resources to individuals, thereby reducing overutilization and prompting guideline-driven follow-ups and clinically-actionable orders.
- ➔ **COMMERCIAL** – DHIT's Innovation Sprints will increase understanding and alignment from suppliers as to what solutions are needed and what service gaps exist, ensuring solutions are fit-for-purpose.

Conclusion

In order to implement, test and validate our model of change, DHIT is seeking **\$2.5 Million** in funding to execute a **two-year operating plan*** supporting:

- ➔ The promotion and hosting of engagement events to secure community trust across three North Carolina counties.
- ➔ The creation and operation of educational courses to produce Health Architects out of UNC Pembroke's College of Health Sciences.
- ➔ The development of the Health Utility Grid to drive a 21st century public health program out of Robinson, Scotland and Cumberland public libraries.
- ➔ The facilitation of innovation sprints to co-develop solutions driven by an individual's determinants of health.

*See attached operating timeline



About DHIT

The Digital Health Institute for Transformation

We are a 501(c)(3) non-profit education and research institute supporting communities through the process of digital health transformation. We collaborate with leading academic institutions, associations, and industry to cultivate talent and ecosystems with our immersive learning platform, harnessing real-world experiences that drive the adoption of next generation skills, capabilities and mindsets needed to foster the digital health leaders and innovators of the future, today.

For further information, contact Michael Levy at michael@dhitglobal.org
dhitglobal.org

Year 1 Timeline (Upon receipt of necessary funding)	M 1	M 2	M 3	M 4	M 5	M 6	M 7	M 8	M 9	M 10	M 11	M 12
Goal 1: Cultivate trust throughout the community through engagement events												
Pop-up speaking events in the Triangle, Charlotte, and the under-resourced tri-county region	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Social media outreach	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Newsletter outreach				✓	✓	✓	✓	✓	✓	✓	✓	✓
Convene Digital Health Summits						✓					✓	
Goal 2: Provide education and training throughout local college system												
Develop Health Architect Course Framework	✓											
Deliver Health Architect course #1	✓	✓	✓	✓	✓	✓						
Deliver Health Architect course #2							✓	✓	✓	✓	✓	✓
Goal 3: Establish a Community Cloud												
Establish software infrastructure v1.0	✓	✓	✓	✓	✓	✓						
Enroll Health Architects, community members, researchers, public health officials, etc.					✓	✓	✓	✓	✓	✓	✓	✓
Establish software infrastructure v2.0							✓	✓	✓	✓	✓	✓
Goal 4: Conduct Innovation Sprints to co-develop solutions												
"Discovery" phase				✓	✓	✓				✓	✓	✓
"Define the problem" phase							✓	✓	✓			
"Design and Develop solutions" phase										✓	✓	✓

Year 2 Timeline (Upon receipt of necessary funding)	M 1	M 2	M 3	M 4	M 5	M 6	M 7	M 8	M 9	M 10	M 11	M 12
Goal 1: Cultivate trust throughout the community through engagement events												
Pop-up speaking events in the Triangle, Charlotte, and the under-resourced tri-county region	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Social media outreach	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Newsletter outreach	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Convene Digital Health Summits						✓					✓	
Goal 2: Provide education and training throughout local college system												
Deliver Health Architect course #3	✓	✓	✓	✓	✓	✓						
Deliver Health Architect course #4							✓	✓	✓	✓	✓	✓
Goal 3: Establish a Community Cloud												
Establish software infrastructure v3.0	✓	✓	✓	✓	✓	✓						
Establish software infrastructure v4.0							✓	✓	✓	✓	✓	✓
Goal 4: Conduct Innovation Sprints to co-develop solutions												
"Discovery" phase				✓	✓	✓						
"Define the problem" phase	✓	✓	✓				✓	✓	✓			
"Design and Develop solutions" phase				✓	✓	✓				✓	✓	✓