# Streetcoin: integrating place-based social landscape with healthcare risk models through the electronic health record

Alan Waxman, MLA Chethan Sarabu, MD

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Alan Waxman, MLA

Landscape Architecture Urban Design

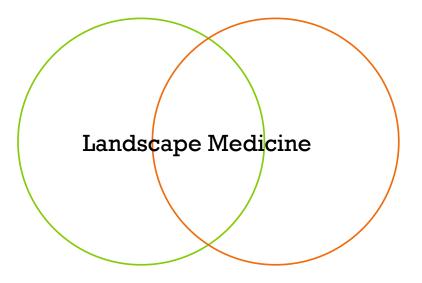


Chethan Sarabu, MD

Paediatrics Clinical Informatics



Municipalities City Planning Landscape Architecture Streets, Parks, Buildings Maps Healthcare system Doctors Nurses Hospitals & clinics Electronic health records 21<sup>st</sup> century model



Landscape medicine:

A place-based framework for valuing community assets through the healthcare system

#### Landscape Medicine

A place-based framework for valuing community assets through the healthcare system



Electronic Health Records/Maps

Cipher/streetcoin

Patients/Community

Social determinants of health/Environment

The time is ripe to connect landscape and medicine; particularly in the United States but globally as well.

As costs have escalated, all health systems are looking to invest in upstream preventive measures to decrease costs.

We also now have the technology and data layers to link the urban landscape, people, and health systems.

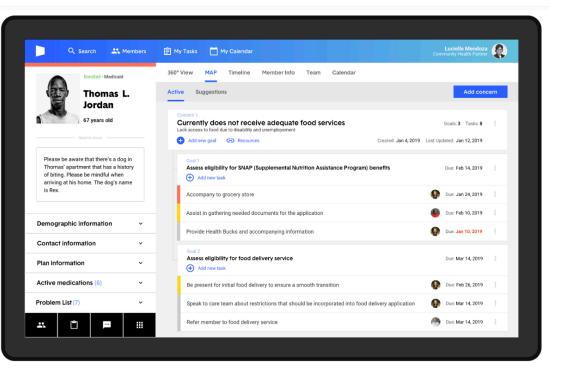
This is giving rise to a new type of healthcare/insurance system known as Accountable Care Organizations (ACOs).



#### Health is local.

Cityblock was founded on the premise that health starts at the neighborhood level, and that everyone should have good care for what matters to them. We saw firsthand how healthcare has fallen short in providing adequate care for people living with complex health and social needs—and knew there was room for improvement.

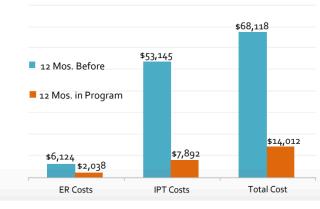




#### **Cost Avoidance**

Figure 6: Cost Avoidance

Hospital Cost Avoidance Pre– and Post– Enrollment \$54,106 average per person per year, n=77



**Net Cost Avoidance:** Amount saved after accounting for 10th Decile Program Costs \$34,306—\$39,556

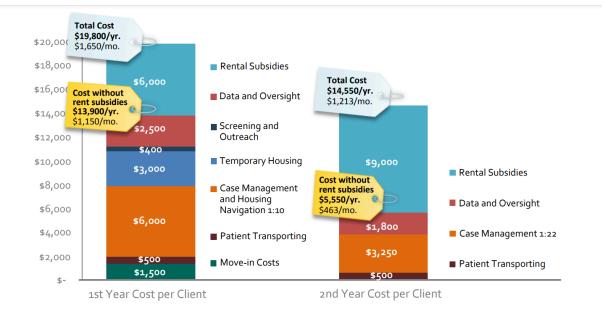
ER Costs Down 67%

Inpatient Costs Down 85%

Total Costs Decreased 79%

# **10th Decile Project**

Los Angeles, CA | September, 2015





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#### Health Benefits

#### The Benefits of Nature are **Mental**

There are currently more than 400 studies that demonstrate the numerous health benefits that nature provides. Below we've highlighted a few key resources that give an overview of the findings. You can also find relevant infographics in the ParkRx toolkit.





Literature Reviews





For Health Professionals

Have you ever prescribed Nature before? As a provider, are you ready to try something new?

How much time do you spend outside in a natural setting during YOUR free time?

Take the opportunity to capitalize on the provider burnout that has to do with prescribing the same medications and doing the same things we do every day without considerable change in our patients' lives.

Learn More »



CREDIT: National Park Service

Prescribe Parks What is Park Rx America? Resources Media Contact

We work closely with managers of public lands to ensure patient access to therapeutic time in nature.

Park Rx America has collected data on thousands of parks and green spaces, searchable by location, with results filterable by standard park attributes and features, and viewable as printable one-page Park Summaries.

We have demonstrated scalability by replicating the park prescription model in diverse park agencies and health provider organizations across the country.

Learn More »

# **Bx**

PRESCRIBER LOGIN 🌡

For Park Agencies



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Note: ADHD, attention-deficit hyperactivity disorder. The references in Table 1 are illustrative rather than exhaustive; they include both recent reviews and research reports and older, widely cited publications.

#### Table 1. Summary of evidence-based health benefits of nature contact.

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Parks are a huge asset, and we need to value them for the 21st century *Alison Benjamin* 

Our green spaces are shrinking, despite all the benefits they give us. If we want to save them, we need to value the ecosystem and health and wellbeing services they offer



Angel Meadow park, Manchester. Many small but vital 'green lungs' are being lost to development. Photograph: Ian Canham/Alamy

#### THE CONTINUES

# Newcastle uses public health cash to save city parks

#### Jon Ungoed-Thomas

February 26 2017, 12:01am, The Sunday Times

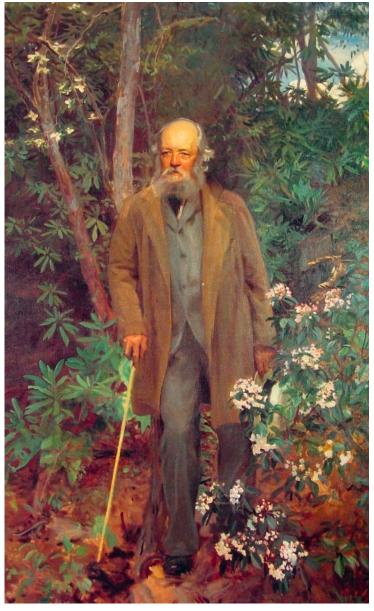


Leazes Park, Newcastle: the council says open spaces provide huge health benefits  $\ensuremath{\mathsf{ALAMY}}$ 

Newcastle city council has become one of the first local authorities in Britain to use millions of pounds from its public health budget to help keep open its public parks.

The council says health budgets and NHS funds should be used to fund cash-strapped parks as such open spaces provide huge health benefits.

# Precedent



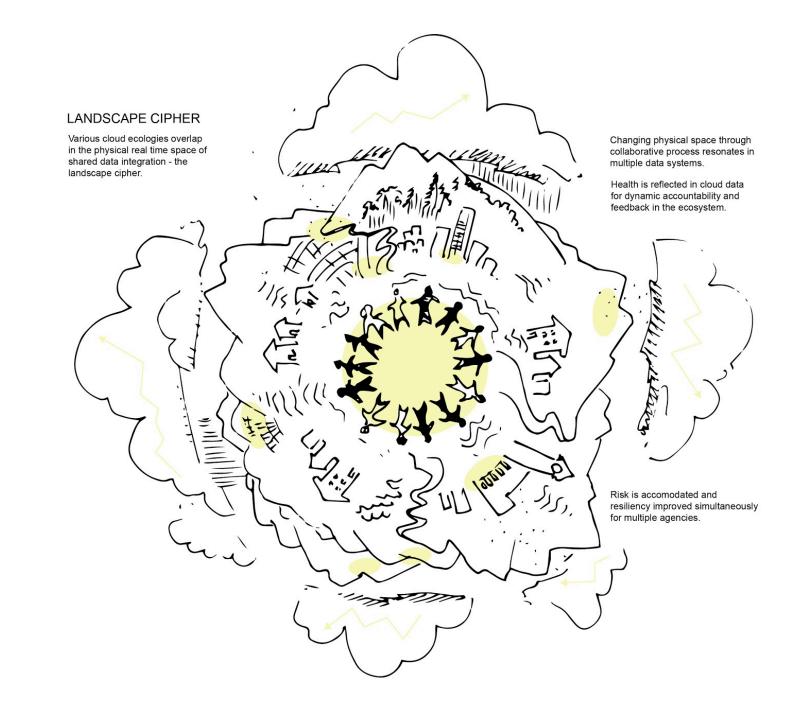
Frederick Law Olmsted



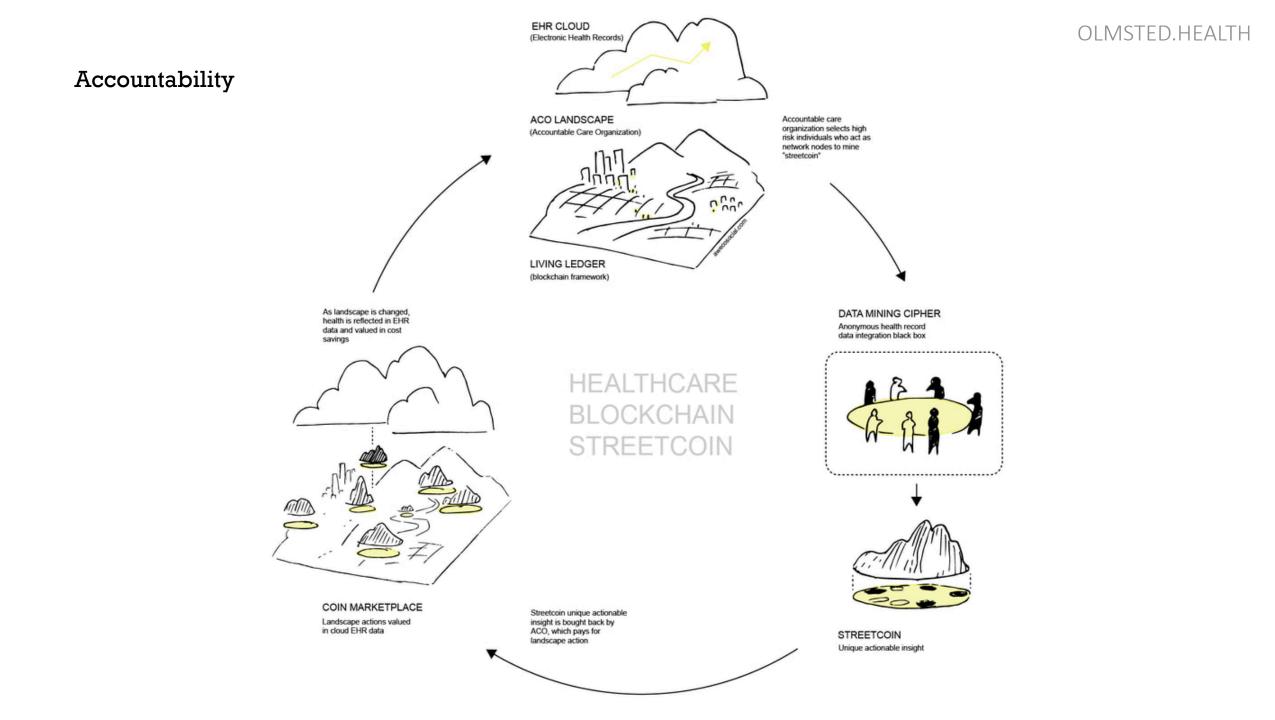
Smohalla

# Olmsted.health

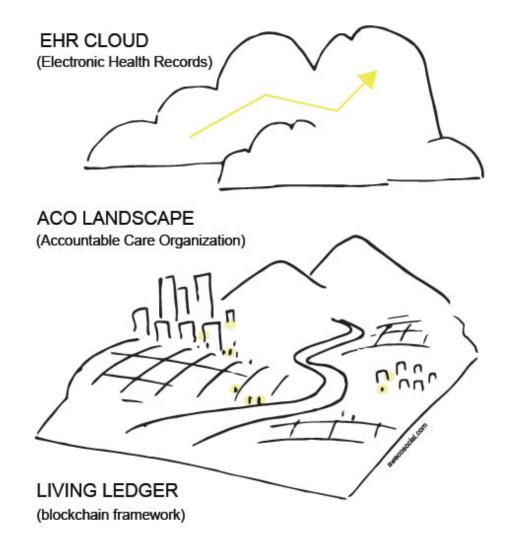
https://www.olmsted.health



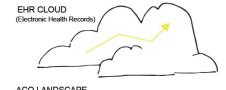
#### Stewardship



# Healthcare EHR Clinician/Patient



Patient – Clinician View

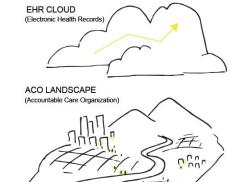




LIVING LEDGER (blockchain framework)



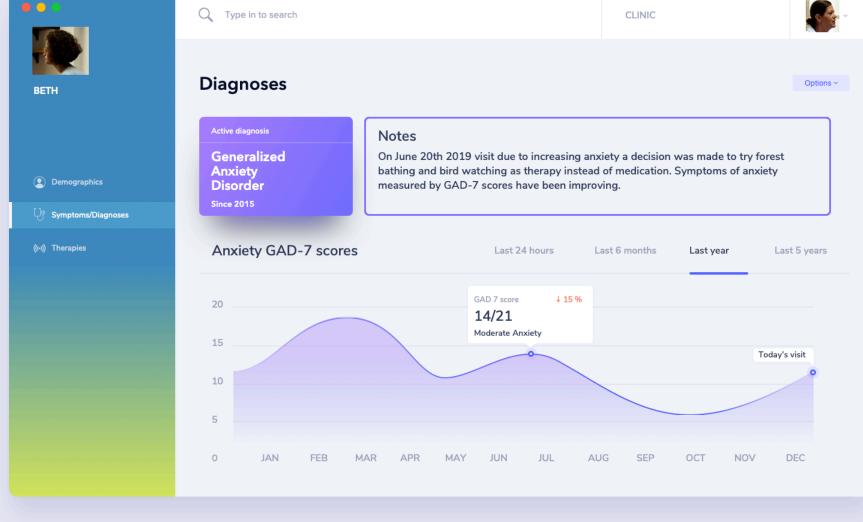
# Physician view: patient story



LIVING LEDGER (blockchain framework)

BROOKLYN ACO	Q Type in to search		CLINIC	se -
ветн	Symptoms/Concer	'ns		Options ~
	Active diagnosis	Has had long standing anxiety that		
Demographics	Anxiety	seems to be getting worse increasingly due to pressures at school exacerbated		
다. 아이 Symptoms/Diagnoses	Since 2015	by social media based peer pressure.		
((··)) Therapies	Concern Family history of Type 2 diabetes Since 2015	Multiple family members have been diagnosed with type 2 diabetes, wonder what steps can be taken to prevent or delay condition.		
	Concern Excessive Screentime Since 2015	Patient and mother are concerned about her excessive time on her phon and feels that this is disrupting her sleep and other activities.	le	

Monitoring patient condition over time

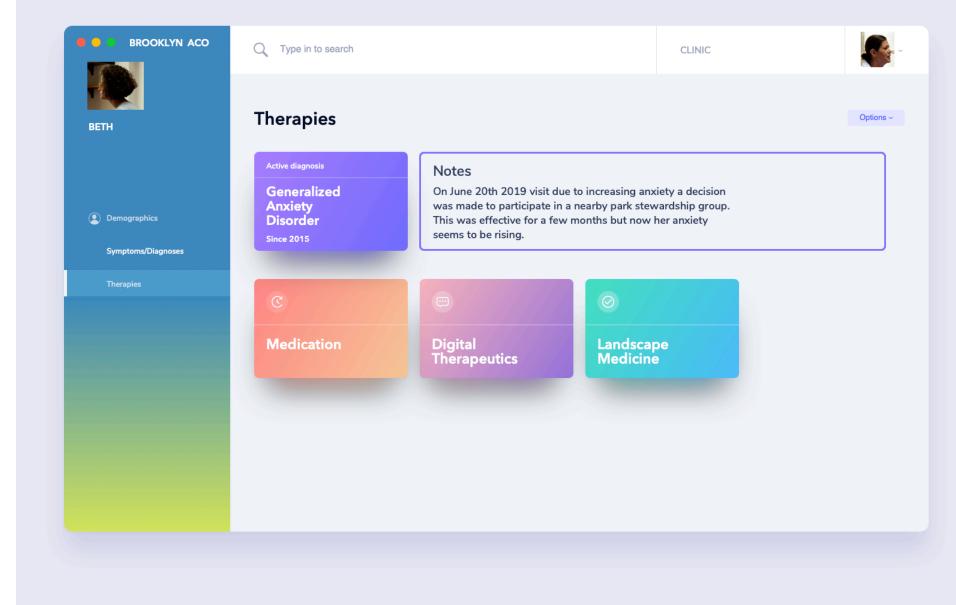




LIVING LEDGER (blockchain framework)

EHR CLOUD

#### Physician view: therapy selection

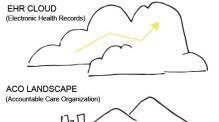




(blockchain framework)

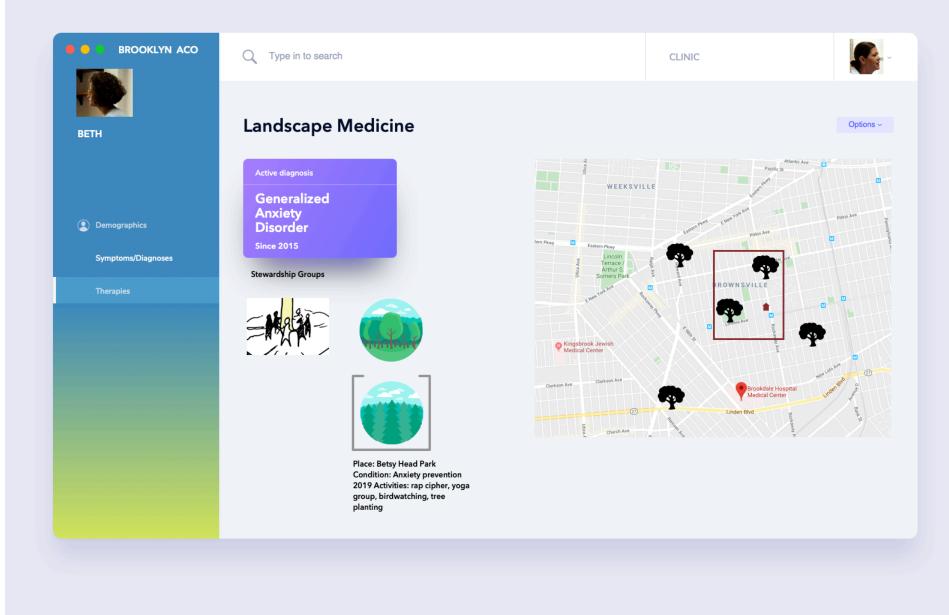
EHR CLOUD

## Physician view: place selection





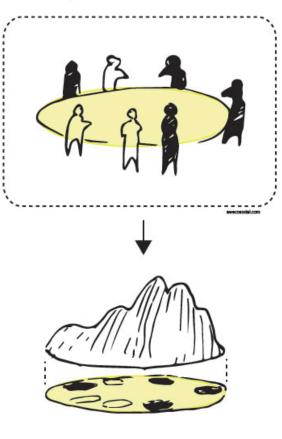
LIVING LEDGER (blockchain framework)



# Stewardship group Landscape doctor

#### DATA MINING CIPHER Anonymous health record

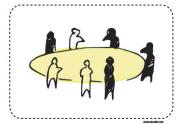


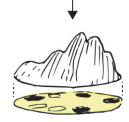


STREETCOIN Unique actionable insight

# Landscape doctor – Stewardship group

DATA MINING CIPHER Anonymous health record data integration black box



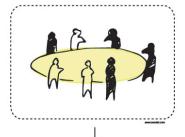


STREETCOIN Unique actionable insight



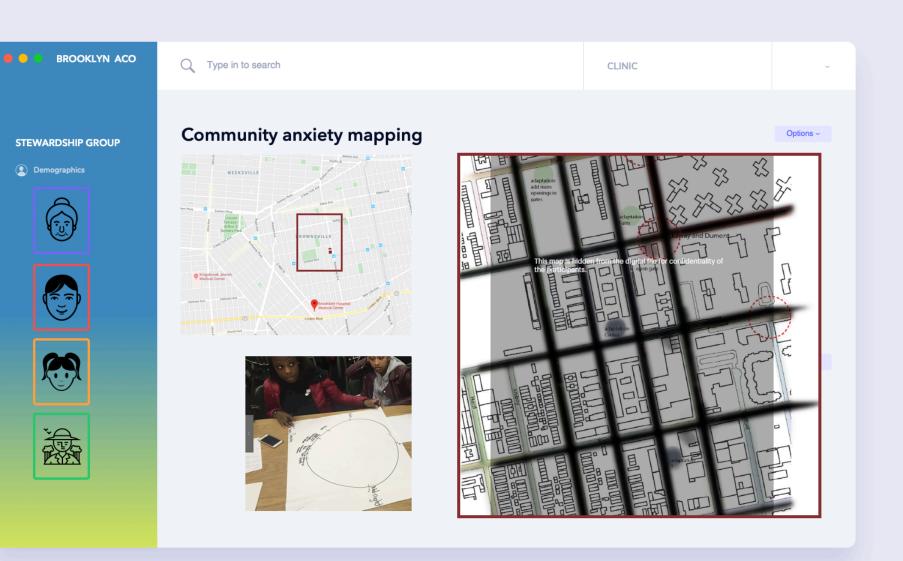
# Landscape doctor view: Stewardship groups

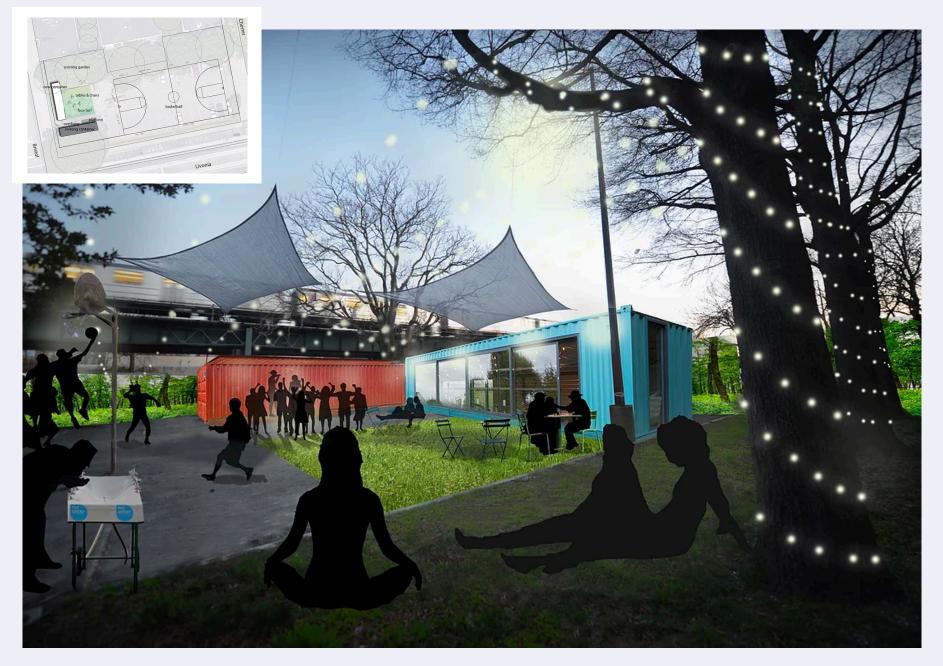






STREETCOIN Unique actionable insight





Olmsted.health: Landscape doctor – stewardship group



Olmsted.health: Landscape doctor – stewardship group

# Streetcoin Accountable Care Organization



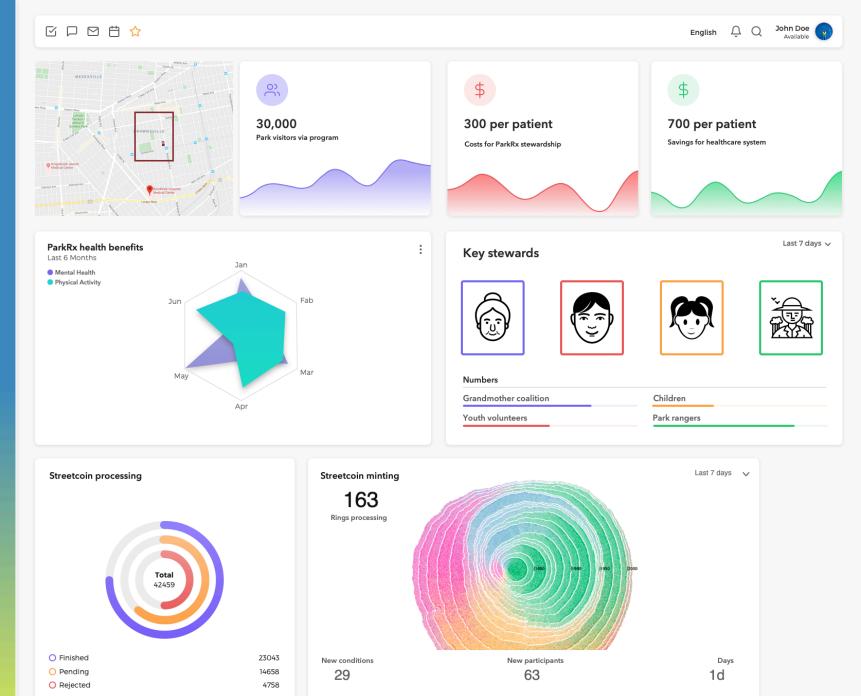
COIN MARKETPLACE Landscape actions valued in cloud EHR data Streetcoin Dashboard

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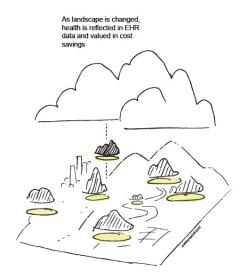
Accountable Care Organization view



COIN MARKETPLACE Landscape actions valued in cloud EHR data



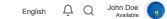
Accountable Care Organization view

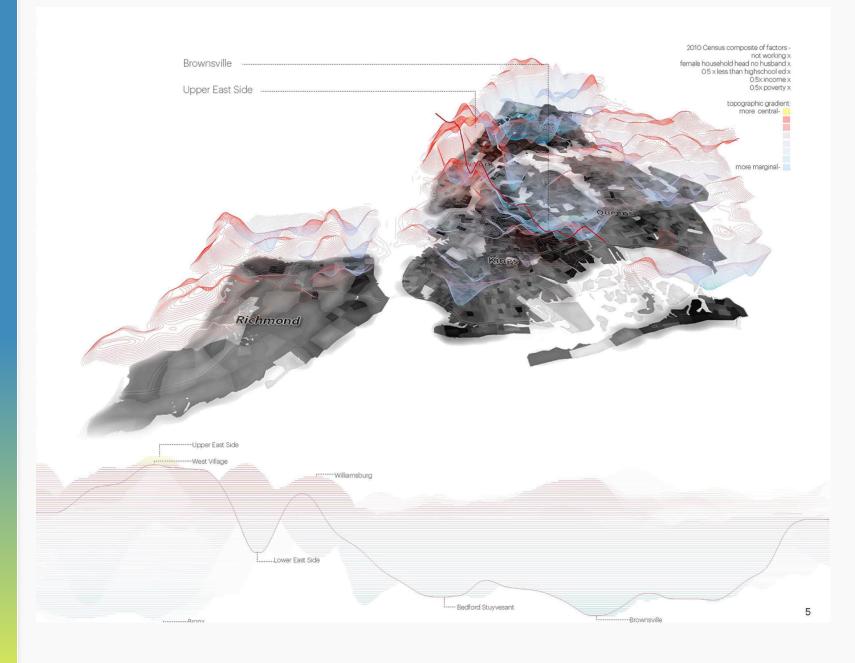


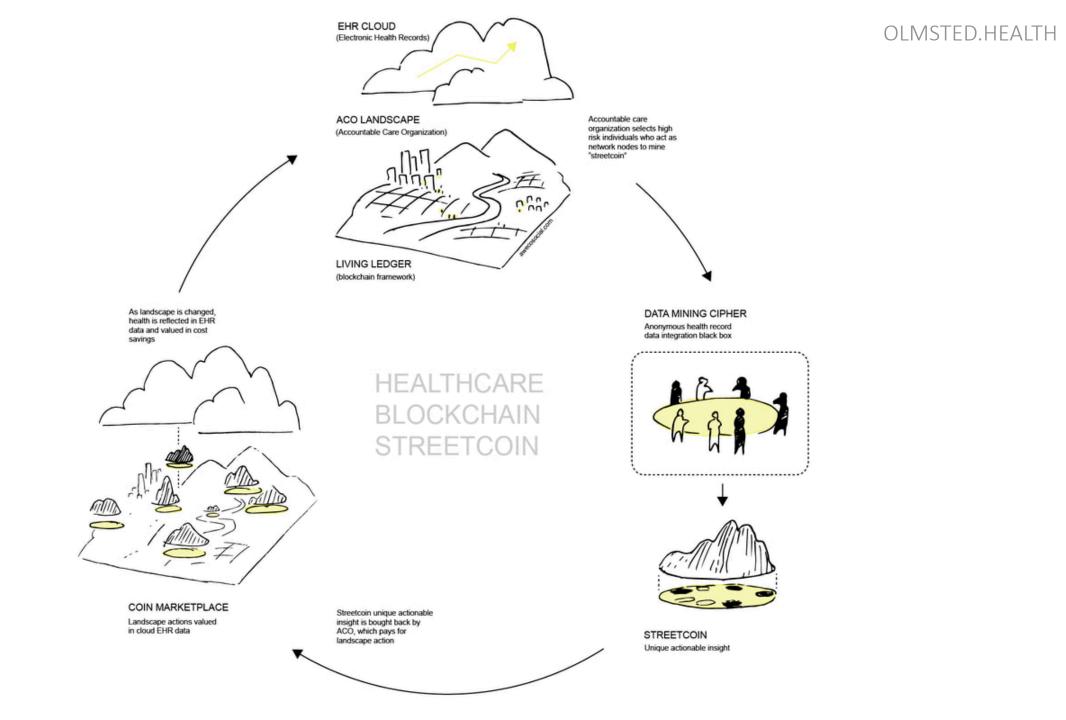
COIN MARKETPLACE Landscape actions valued in cloud EHR data

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Streetcoin Dashboard







#### OLMSTED.HEALTH improving health outcomes with landscape medicine patient led adaptive management

