Community Analytics

MEANINGFUL METRICS FOR A SMART SOCIETY

COMMUNITY DATA

COMMUNITY PERSPECTIVE

FOR DISCUSSION ONLY

Peter Burgess

The Tr-Ac-Net Organization

July 2008

Community Accountancy

Putting accountancy to work for all of society

Contents

PRACTICE
COMMUNITY PERSPECTIVE

PRACTICAL GUIDELINES

At the beginning ... easy data
Lots of lists ... very simple, compiling the "easy data"

Easy data
Do not aim for perfection ... just aim to have useful data that is reasonably right and reasonably easy.

Tr-Ac-Net's system anticipates errors in some of the data ... and will correct errors over time.

Put it on paper ...
Put the information onto paper ... or put it into the Tr-Ac-Net database directly using web forms.

The information can be e-mailed to Tr-Ac-Net or an authorized user may update the database directly.

The data may be corrected later ... nothing is 100% wrong. A good estimate is way better ... and may be sufficient for excellent decision making.

Types of data
There are two different types of data ... data that move fast and change rapidly, and data that changes slowly. These different types of data should be handled in different ways. Much of the easy data are slow changing data.

Much of the description of the community is slow changing information, and very valuable to know. Many aspects of the community are pretty much the same from year to year ... the location of the community, the size of the community, the main demographics of the community, the main economic activities of the community, the main resources of the community, the main issues for the community.

The CA framework classify these many items and to track progress over time. Each item is therefore classified to show where it stands in terms of being positive or being negative for the community .... and where it stands in terms of whether it is an item that is getting better or getting worse.

Use text to start ... do numbers later
The key is to get facts on the record.

The starting point is words. Words are easy to use to describe something in broad terms ... better than numbers.

But some numbers are useful, for example:
- *The size of the population*
- *The area of the community*
- *The distance of the community from the various other towns in the area and the big cities of the country.*

Journalists are trained to use numbers to make their story interesting and credible. Accountants want a number because they want to use it to compare it with something. Accordingly the numbers should have some clarity about what they are and how they have been compiled.

When some facts are on the record, it is possible to start characterizing the information and putting putting them into some sort of importance ranking.

What this info will show - 1
This info is going to start to show what aspects of the community are strengths and what are weaknesses. This can be done with two rankings:
- *How much of a weakness this is? 1-5*

- *How much of a strength this is? 1-5*
- *Neither a strength nor a weakness? 0*

What this info will show - 2

Another piece of the ranking is whether or not this is of great importance for the community or not.
- How important is this matter for the community? 0-5

What this info will show - 3

This info is going to start to show how different aspects of the community are changing over time. This can be done with three rankings:
- *Getting worse? 1-5*
- *Getting better? 1-5*
- Not changing very much? 0

What this info will show – 4

This information can be used to identify how important the item is for the future of the community.
- How important is this matter for the future of the community? 0-5

Using quantities without either costs or values.

More people know about quantities than know about either costs or values. After a good foundation of what is going on in text terms has been compiled it becomes possible to start putting in some quantity information.

Balance sheet information can be quantified:
- *The quantity of food stocks in the community*
- *The quantity of vehicles in the village*
- *The quantity of houses in the village*
- *The length and type of road in the village*
- Etc.

Activity information can be quantified:
- *The amount (quantity) of the crop*
- *The number of cases treated at the clinic*
- *The number of births*
- *The number of deaths*
- *The number of people working*
- Etc.

Identifying trends

Getting data about trends is key to getting good decisions made, and holding people accountable. The goal is to get good trends stronger and the weak trends fixed.

Identifying systemic constraints

The data helps in the identification of systemic problems and constraints.

Using balance sheet change to determine rate of progress

The changes in the balance sheet are a measure of progress.

1
NAME OF THE COMMUNITY

Identify the Community – what is the name identification
The best way to define a community simply by its common name.

Sometimes the the post code will work ... this is easy, and might well give a very sensible way of delineating the area.

Another way is to identify a well known landmark, and identify the community relative to this landmark.

Another way is to identify an affinity group or traditional community and do the community analysis with respect to this group.

It is desirable that communities do not overlap, because in the add-up or roll-up aggregation an overlap causes potential duplication. The system is designed to handle this, but the simpler approach is for area clarity without duplicating overlap.

Name		
Alternative Name 1		
Alternative Name 2		

Country		

State / Province/ Region		

Two lines about the community

2
ABOUT THE COMMUNITY

How big?		
About the population		
About the geographic area		
About the number of houses		
About the number of other buildings		
About the number of jobs		
About the size of the payroll		
Etc:		

Location?		
How far from ...		
How far from ...		
How far from ...		
About the geographic area		
About the number of houses		
About the number of other buildings		
About the number of jobs		
About the size of the payroll		

3
A LITTLE MORE INFORMATION

About People
Something about the people. How many people? What is typical? What is unusual? What are problems and what are possibilities.

About Activities
Something about activities in the community. In large part these are what keeps the community going.

About Organizations
Something about organizations in the community. Are they of importance? What are they doing? Are some of them government? Are some of them NGOs?

About Projects
Something about projects in the community. Are they of importance? What are they doing? What organizations are involved?

About Issues
What issues are critical in the community, and what is needed to make progress in addressing the issues.

4
EXPANDED INFORMATION

What People

What people are associated with this community. The reason for putting a focus on people is that people are the reason for everything ... they are the problem, they are the solution, they are a resource, they are a constraint and they are catalysts. Until there is an ability to understand and relate to the people the effectiveness of anything is going to be compromised.

People		

What Activities

What activities are associated with the people of this community, and what are the socio-economic characteristics of these activities. For example:

- *Food production*
- *Trading activities*
- *Transport*
- *Construction*
- *Education*
- *Health*

Activities		

What Organizations

What organizations are associated with this community, and what are these organizations doing. Are they local organizations or branches of bigger national or international organizations.

What people are associated with what organization?

What activities are associated with what organization?

Organizations		

What Projects

What projects are associated with this community, and what are these projects doing. Are the projects part of national scale projects or just local.

What people are associated with what projects?

What activities are associated with what projects?

Projects		

More about the issues

The issues probably hold the key to making a success of the future. Therefore start to pull together useful facts about the sectors where issues are identified. Useful facts include information about

- *people associated with the issue*
- *organizations associated with the issue*
- *activities associated with the issue*
- *resources associated with a possible solution or causing the problem*
- etc.

Opportunities		

Issues … Constraints		

COMMUNITY BALANCE SHEET

Building a balance sheet

The data described up to now is a good starting point for writing up a community balance sheet. The first version of the balance sheet offsets the good things with the bad things.

TIP

Do the easy thing to start off with ... do not worry about those things that are not very obvious. Bottom line ... we are trying to document what is important ...the accounting concept of materiality

List the GOOD things		List the BAD things
How much are the BAD things bigger than the GOOD things		How much are the GOOD things bigger than the BAD things
What is the NET picture of the community ... is there an image of potential or is it one of crisis?		

COMPARATIVE BALANCE SHEETS

Setting up the balance sheet to track progress

The data described up to now is a good starting point for writing up a community balance sheet. The first version of the balance sheet offsets the good things with the bad things. This format facilitates comparison between two balance sheets ... it makes it easy to compare similar things, and draw conclusions.

TIP

As a start, consider just getting some information about things that have changed ... things that stay the same have less immediate interest for the moment. By definition, for things that have not changed ... the change is ZERO.

Comparative Balance Sheet		
Beginning of Period	**End of Period**	**Change**
List the GOOD things	**List the GOOD things**	**Change**
List the BAD things	**List the BAD things**	**Change**
Net summary	**Net Summary**	**Net Summary**

5
JOURNAL

What does a journal do?

A journal gets key events on the record. It should attempt to put on the record as much of the community activities as possible ... and absolutely anything and everything of socio-economic importance that people do in the community.

It is a journal ... it is writing about the community. It is factual and NOT judgmental. The bad things can more easily be fixed when they are in the record.

What are community activities?

Community activities are absolutely anything and everything of socio-economic importance that people do in the community. Thus, for example:
- *Farming*
- *Fishing*
- *Educating children*
- *Providing health care*
- *Looking after orphans*
- Doing construction

To the extent that organizations do things, their activities are also community activities.

Reason for collecting data

The reason for collecting data is to have sufficient understanding so that advice is useful and to track progress being achieved. When more people have access to data, and the data are relevant, the more people ca take part in providing support and help.

Collecting data

Collecting data about activities should be limited, and only done in cases where the activity and the costs are closely linked to some priority impact for the community. Thus, for example:
- *Bednet distribution*
- *Bednet use*
- *Malaria cases*
- Prevalence of malaria

Or:
- *Use of fertilizer*
- Increase in crop yield

To the extent that this is built into the Community Accountancy system, in due course these activities and these impacts will be expanded to have costs and to have values.

In many cases enough information about activity can be derived from a knowledge of how the community balance sheet changes

Organizing data

The process of organizing data should be flexible ... let the important drive the organization of the data. Pull similar things together. Put a focus on what is important.

One thing applies universally for everything ... it belongs on the record.

Keeping control of data

Recording data can be thought of as a transaction that has a data and time, a subject, and a location. It is clear when these data are duplicated because the same thing is said about the same place. If there are differences, some simple research can be made.

In good record keeping, pages are numbered, and in many cases lines are numbered. In the Tr-Ac-Net system each transaction has a transaction ID# that is unique.

6

SECTORS … SUBJECTS

Some of the subject areas

About livelihood		

About opportunity		

About trade and market prices		

About money and microcredit		

About governance		

About health		

About education		

About infrastructure

About housing

About water

About sanitation / latrines

About family matters

About security

About migration

About external investment and exploitation

About environment

7
TRANSACTION RECORD

Identify the Item	*What is needed*
About this item ... past and present	*for the future.*

Past change	**Present Importance**	**Priority for Future**
Is this item:	*Describe whether this item is:*	What it the priority for this to improve the future?
● *Getting better*	● *A community strength*	
● *No change*	● *Neither a strength or a weakness*	
● *Getting worse*	● *A community weakness*	

Getting	*No*	*Getting*		*Community*	*Little*	*Community*		*Little*	*to*	*Very*
worse	*change*	*better*		*weakness*	*impact*	*strength*		*importance*		*important*
5 4 3 2 1	**0**	**1 2 3 4 5**		**5 4 3 2 1**	**0**	**1 2 3 4 5**		**0**	**1 2 3 4 5**	

Identify the Item	*What is needed*
About this item ... past and present	*for the future.*

Past change	**Present Importance**	**Priority for Future**
Is this item:	*Describe whether this item is:*	What it the priority for this to improve the future?
● *Getting better*	● *A community strength*	
● *No change*	● *Neither a strength or a weakness*	
● *Getting worse*	● *A community weakness*	

Getting	*No*	*Getting*		*Community*	*Little*	*Community*		*Little*	*to*	*Very*
worse	*change*	*better*		*weakness*	*impact*	*strength*		*importance*		*important*
5 4 3 2 1	**0**	**1 2 3 4 5**		**5 4 3 2 1**	**0**	**1 2 3 4 5**		**0**	**1 2 3 4 5**	

8

KEY ITEM TIME SERIES

Time series

Time Series of Data Points

Simple data collected over time has a lot of analytical value. The academic community describes this methodology as the Multiple Baseline Time Series methodology.

Some data are useful when collected every day ... other data may have utility collected on a weekly or monthly basis. Some time series are sufficient when reported as an annual series.

The value of data that are collected daily, weekly or monthly is different from data that are summarized, aggregated or averages for the year.

Seasonality may have an important effect on the numbers … and this has to be understood.

Some examples:
- *Daily cases of malaria at the clinic*
- Daily food prices in the market

When the time series shows changes ... local people must learn why and seek help if the change indicates an emerging problem.

Community Profile of Costs

One set of simple data is a series of datasets about costs ... what do different things cost in this community.

One of the costs are wages and salaries ... what are the prevailing wages and salaries in the community.

What do essential foods cost.

What do agricultural inputs cost.

These data will help Tr-Ac-Net develop a generally accepted set of standard costs.

Time series		
Market prices		
Health data		
Mosquito data		
Currency exchange rates		
Food stocks		
Crop production		
Wage and salary rates		
Population		
Births		
Deaths		

9
COMMUNITY VALUES

Community profile of values

What are the values that prevail in the community. People do amazing things because they think it is worth doing ... looking after orphans ... caring for the sick and the elderly ... feeding the hungry ... educating the children ... and so on. What is the value of these things from the perspective of the community. These data will help Tr-Ac-Net develop a widely recognized set standard values and community value profiles:

- People ... Family and Friends
- Infrastructure
- Services ... Health
- Services ... Education
- Economic Activities
- Governance ... Enabling Environment
- Religion ... Spiritual Values

Standard Values

People … Value loss and mortality

What is the value loss when a 1 year old child dies? There is a huge emotional bond between a child and the parents, relatives and friends. The economic value is not substantial. The child is in the world … which is a miracle … but the investment to make the child economically valuable is still to come … the 1 year old child has potential value, but not much present value For the sake of argument think of this value loss as 1,000!	
What is the value loss when a 20 year old person dies? From 1 year old to 20 years old there has been substantial investment in time, effort and treasure. Depending on where the person has grown up, it is possible that the money investment may now be in the range of $500,000 … the cost of education, healthcare, food, clothing, housing and entertainment. Again, depending on the place, it is possible that the economic earning potential of this person is now in the range of $100,000 per year … with a total over a 40 year period probably in excess of $5 million. The discounted present value of this may now be around $2 million … the actual present value depending on the discount rate used. The value loss if a 20 year old dies is many times bigger than when a 1 year old dies … maybe as much as 5,000 times bigger. This would mean that this value loss is 5 million!	
What is the value loss when a 60 year old person dies? When a 20 year old dies there is a future that disappears … a surplus producing future which has substantial economic value When a 60 year old dies there is much less surplus producing future that is being lost … in fact what is being lost may be a future of economic value destruction … maybe a series of value deficit years.	

Standard Values

People ... Value loss and mortality

What is the value loss when a very sick old person dies? When a very sick old person dies there is an important emotional loss that should not be ignored. But the economic consequence of a very sick old person dying may be positive. Little or no future surplus value production is being lost, and all sorts of future costs are being eliminated.	
What is the value loss when an old person dies … old but still active? When an old person dies there is a loss … an active old person adds a lot to family and community … not much that is pure economic value, but a lot that is less tangible, not least are the old stories that link the children with the stories of the ancestors!	
What is the value of a life … a lifetime? As a person goes through life, there is an accumulation of cost and investment … and an accumulation of economic income that offsets these costs. As a person grows up there are costs associated with education that makes it possible for additional income to be earned … and as a person ages there are increasing costs associated with maintaining health. A sustainable society is one where people over their lives add more value than they consume. This is a key metric about sustainable progress.	

Standard Values

People ... Family and Friends

Grandma looking after orphans and vulnerable children This is an activity that is worth hundreds and thousands of dollars per child per year. Hardly any programs help Grandma, yet this is one of the most cost effective activities in any community.		
Looking after an old person Looking after an old person has little money value ... but it is a critical piece of giving back, and has huge value for an individual and for family. From the socio-economic perspective, and for community value looking after an old person is very valuable. It is very very valuable.		
Looking after a (working age) sick woman Looking after a working age sick woman has many dimensions ... this person probably has many responsibilities that need to be taken care of ... and getting the person back to functioning is important with money consequences. There is a social value as well ... and important.		
Looking after a (working age) sick man Looking after a working age sick man may have important money consequences if the person is the source of money for the family ... and in this case getting the person back to functioning has money consequences. There is a social value as well ... and important.		
Transporting someone to the clinic or hospital		

Standard Values

Infrastructure

Water ... good, safe potable water The value of good water is huge ... but not appreciated until it is not available. No safe water and there are serious health repercussions. The value associated with better health is very big. Some safe water is enough to avoid the most serious adverse health consequences. The value of more safe water is then merely the value of convenience.	
Roads and bridges	
Electricity	
Telephone	
Internet	
Radio, TV	

Standard Values

Services … Health

Clinics		
Doctors		
Nurses		
Medical supplies, drugs		
Medical treatment that saves a young child's life Death for any young child is failure … at the emotional level and in terms of right and wrong … such death is wrong. But socio-economic metrics have to recognize that a young child is an immediate liability while at the same time being a vital value to the parents' old age. And socio-economic metrics must also recognize the risk of rapid death due to other childhood disease … or death from reinfection within the same area of disease (malaria). And these metrics may also incorporate the replacement potential with multiple children being born into the family.		
Saving a child in childbirth		
Saving a mother in childbirth		
Saving a young child's life		

Standard Values		
Services ... Education		
Early childhood		
Kindergarten		
Primary		
Teaching very young children ... toddlers		
Teaching kindergarten		
Teaching primary school children		
Teaching secondary school children		
Teaching vocation school subjects		

Standard Values

Economic Activities

Creating a job The value of creating a job is big ... not only immediately but over time as well. Jobs ... the salary makes the multiplier work. Money paid out for wages, becomes buying power for the worker and the family. The work helps to create goods and services that have value ... and in the best of cases, are of value for society.		
Agriculture ... producing food		

Standard Values

Governance ... Enabling Environment

Community Leadership		
Local taxes ... community revenues		

10
LISTING OF ISSUES FOR THE COMMUNITY DIALOG

1 1 General
1 1 1 Location
2 1 2 Population and Demographics
3 1 3 Physical Geography

2 5 Natural Resources
9 2 1 Agriculture
10 2 2 Fisheries
11 2 3 Minerals
12 2 4 Coal, oil and gas
13 2 5 Timber
14 2 6 Bio-diversity
15 2 7 Game and wildlife
16 2 8 Water

3 3 Economics
17 3 1 Jobs and Employment

4 4 Money and banking
18 4 1 Microcredit
19 4 2 Minicredit
20 4 3 Municredit
21 4 4 Housing finance
22 4 5 Business banking
23 4 6 Insurance, etc.
24 4 7 Remittance systems

5 5 Infrastructure
25 5 1 Housing
26 5 2 Water
27 5 3 Sanitation
28 5 4 Electricity
29 5 5 Community facilities
30 5 6 Roads and bridges
31 5 7 Seaports and waterways
32 5 8 Airports
33 5 9 Energy
34 5 10 Communications

6 6 Science and Technology
35 6 1 Medical science
36 6 2 Transport technology
37 6 3 Communications
38 6 4 Knowledge technology

7 7 Business
39 7 1 Construction
40 7 2 Retail trade
41 7 3 Wholesale trade
42 7 4 Transport
43 7 5 Mining Industry
44 7 6 Agriculture
45 7 7 Fisheries
46 7 8 Forestry

47 7 9 Agro-Industry
48 7 10 Manufacturing
49 7 11 Hospitality
50 7 12 Tourism
51 7 13 ICT telecenters
52 7 14 Prostitution
53 7 15 Narcotics

8 8 Professional

54 8 1 Accounting
55 8 2 Legal
56 8 3 Business consulting
57 8 4 Other consulting
58 8 5 Engineering
59 8 6 Architects
60 8 7 Testing labs

9 9 Health

61 9 1 Health status
62 9 2 Health professionals
63 9 3 Other health workers
64 9 4 Health infrastructure
65 9 5 Health organizations
66 9 6 Health services
67 9 7 AIDS
68 9 8 Malaria
69 9 9 Mother/child

10 10 Education

70 10 1 Literacy and educational status
71 10 2 School infrastructure
72 10 3 Teachers and school supplies

11 11 Not for Profit Services

73 11 1 Local organizations
74 11 2 Visiting organizations
75 11 3 Religion and Religious organizations
76 11 4 Orphans and vulnerable children
77 11 5 Hospice care

12 12 Culture

78 12 1 Music and dance
79 12 2 Tradition and history

13 13 Other

80 13 1 Any other matter

14 2 Governance

4 14 4 Community Governance
5 14 5 Area Governance
*6 14 6 National Governance *

15 3 Security

7 15 7 Security
8 15 8 Crime rate

16 8 Sports
17 9 Entertainment

10 - a
Dialog about a Community

from the Tr-Ac-Net website as of July 7, 2008

Location of this community
New York NY 10065 is:

No distance from information yet
Where is the community located
About the population as of
commctryregion1
commctryregion2
commctryregion3
commctryregion4
Distance of community from key places:
[1] from
[2] from
[3] from

editsourceinfo
Record reference number is 3271
Edit by whom and when
New...Timeout peterbnyc@test0945 2008-06-10 14:00:43

General:

Location
33 , One of the best locations in the world
The Upper East Side is one of the most desirable neighborhoods in the world ... but there is much more to this than just simply words. People who can choose to live anywhere in the world choose the Upper East Side, but people who really did not choose, but got here by accident, also learn to live and love it. It is quiet, convenient and well serviced ... most of the time!

Population and Demographics
35 , Population profile
The profile of the population in this community is older and predominantly white, though this is changing as wealth moves to all ethnic groups. Most of the residents are relatively wealthy, though not all. The blocks on Fifth Avenue, Madison, and Park are considered the wealthiest, but parts of Lexington and Third are moving up ... as are all the blocks all the way to the East River.

Physical Geography

Governance:
Community Governance
Area Governance
National Governance

Economics:
Jobs and Employment

Security:
Security
Crime rate
31 , Low crime rate
The Upper East Side is a safe area with good solid community policing ... in general a very good record of safety and lack of criminality. The area is well policed and the crime rate is very low.

Money and banking:
Microcredit
Minicredit
Municredit
Housing finance
Business banking
Insurance, etc.
Remittance systems

Natural Resources:
Agriculture
Fisheries
Minerals
Coal, oil and gas
Timber
Bio-diversity
Game and wildlife
Water

Infrastructure:
Housing
Water
Sanitation
Electricity
Community facilities
Roads and bridges
32 , Parking
One of the issues is parking. Off street parking is limited and expensive, and the on street parking not easy to negotiate. Most streets have parking meters that are active during the day until early evening (7 pm), and the maximum meter time is 1 hour. Many areas are limited to parking by police and fire department staff. Other areas are limited to Press and to UN Mission vehicles. Some streets do not have meters but are alternate side parking to allow street cleaning.
Seaports and waterways
Airports
Energy
Communications

Science and Technology:
Medical science
Transport technology
Communications
Knowledge technology

Business:
Construction
Retail trade
Wholesale trade
Transport
Mining Industry
Agriculture
Fisheries
Forestry
Agro-Industry
Manufacturing
Hospitality
Tourism
ICT telecenters
Prostitution
Narcotics
Professional:
Accounting
Legal
Business consulting

Other consulting
Engineering
Architects
Testing labs

Sports:

Health:
Health status
Health professionals
Other health workers
Health infrastructure
Health organizations
Health services
AIDS
Malaria
Mother/child

Entertainment:

Education:
Literacy and educational status
School infrastructure
Teachers and school supplies

Not for Profit Services:
Local organizations
Visiting organizations
Religion and Religious organizations
Orphans and vulnerable children
Hospice care

Culture:
Music and dance
Tradition and history

Other:
Any other matter

10 – b
Dialog about this Community

From the Tr-Ac-Net database December 2009

General:
Location
Population and Demographics
Physical Geography

Governance:
Community Governance
Area Governance
National Governance

Economics:
Jobs and Employment
Security:
Security
Crime rate

Money and banking:
Microcredit
Minicredit
Municredit
Housing finance
Business banking
Insurance, etc.
Remittance systems

Natural Resources:
Agriculture
Fisheries
Minerals
Coal, oil and gas
Timber
Bio-diversity
Game and wildlife
Water

Infrastructure:
Housing
Water
Sanitation
Electricity

Community facilities
Roads and bridges
Seaports and waterways
Airports
Energy
Communications

Science and Technology:
Medical science
Transport technology
Communications

Knowledge technology

Business:
Construction
Retail trade
Wholesale trade
Transport
Mining Industry
Agriculture
Fisheries
Forestry
Agro-Industry
Manufacturing
Hospitality
Tourism
ICT telecenters
Prostitution
Narcotics

Professional:
Accounting
Legal
Business consulting
Other consulting
Engineering
Architects
Testing labs

Sports:

Health:
Health status
Health professionals
Other health workers
Health infrastructure
Health organizations
Health services
AIDS
Malaria
Mother/child

Entertainment:

Education:
Literacy and educational status
School infrastructure
Teachers and school supplies

Not for Profit Services:
Local organizations
Visiting organizations
Religion and Religious organizations
Orphans and vulnerable children
Hospice care

Culture:
Music and dance
Tradition and history

Other:
Any other matter