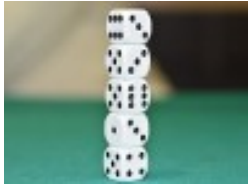the NEIGHBORHOODS NETWORK

STATISTICAL MAGIC
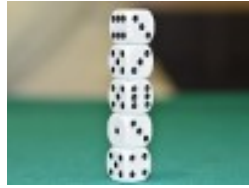
STATISTICAL MAGIC **tNN**

CONTENT of THIS SLIDE SET

1. WHY USE STATISTICS?

2. RANDOM SAMPLING

3. DETERMINE SAMPLING SIZES

4. SAMPLE SIZES (for some Election Districts).

5. A CAUTION ABOUT SAMPLING

STATISTICAL MAGIC

WHY USE STATISTICS?

1. Neighborhoods need to exchange information and collaborate with other neighborhoods.

2. In virtually every election district pertinent to governance there will be a huge number of neighborhoods.

3. Intelligent application of statistical technique, on each governance issue, permits us to communicate with a 'reasonable' number of neighborhoods to perform our necessary work.
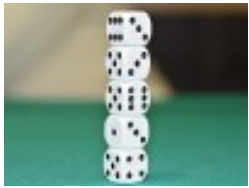
4. On each issue, we can find a small number of neighbor-hoods to poll or collaborate with because the number of viewpoints on any given issue is likely to be small (let's say two or three or so) .

5. That means, on any given issue, if we pick say six or so neighborhoods for collaboration at 'random,' we are likely to encounter all (or most) views of the issue in the relevant general population.

6. And where we need very reliable data on how a relevant population feels about a potential solution to a problem and a proposed policy for government to implement – a few hundred or thousand neighborhoods will be sufficient.
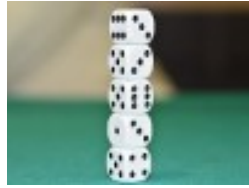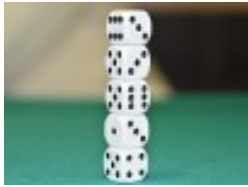
STATISTICAL MAGIC

RANDOM SAMPLING

1. 'Random sampling' means we pick (choose, select) from a multitude of entities (neighborhoods in our application) without bias.

2. The technique is actually quite simple. First you enumerate the population you want to sample. e.g. 1,2,3, … 999. This enumeration is called the 'range.' Then you tell a computer program this range (1-99), and the number of samples you want (say 6). The program might give you, for example: 9, 13, 37, 56, 75, 93).

3. But how do you know how many samples to ask for?

DETERMINING SAMPLING SIZES

1. Sample size depends upon what you are trying to do.

2. If you want a small number of neighborhoods to collabo--rate with on forming a solution to a problem or establishing a policy directive, you'd like to keep the number small but large enough to make it likely all viewpoints are present.

3. If you want the sample size sufficient to ensure you will get a very accurate statistic on the acceptance of a 'policy mandate' to be delivered to government – then you need to use a statistical table indicating the sample size.
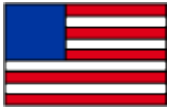
STATISTICAL MAGIC

SAMPLE SIZES

Much reduced table of: **Required Sample Sizes**

| %Accuracy	Confidence level = 80%				Confidence level = 99%			
Pop. Size	20%	10%	5%	2%	20%	10%	5%	2%
50	9	23	39	48	23	39	47	49
1,000	10	39	141	507	40	142	399	806
10,000	10	41	162	931	41	163	622	2,931
1,000,000	10	41	164	1,025	41	166	663	4,130

HOW TO USE THIS TABLE

1. **Choose the 'confidence level**.' This is the percentage of the time you do this particular statistical poll that you are likely to get the accuracy indicated (80% or 99%).

2. **Choose the % accuracy** you expect from this poll. (Columns for 20%, 10%, 5%, and 2% are shown here.)

3. **Choose the magnitude** (the rough size) of the population you want to investigate with your poll.
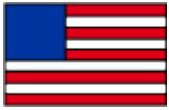
HOW TO USE THIS TABLE

1. **For example**, if you wanted to collaborate with a local group of 50 neighborhoods and want a statistical accuracy of 20% 80% percent of the time (confidence level) you do this, then you should use a sample size of 9 neighborhoods.

2. Or for **another example**, you needed to check the acceptance, with a high confidence level, of a mature candidate 'policy mandate' with the population of an entire country, then you would choose: the 99% confidence level block, the 2% accuracy column, and the 1,000,000 and up row to get 4,130 needed samples.
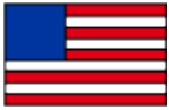
The **main idea** is that to find public opinion, determine how many neighborhoods you need to collaborate with, and to test candidate policy issues – you don't need to 'talk' to the entire population. You can select random and fairly small number of neighborhoods (and people) to be in communication with!!

END of PRESENTATION