# Smart Cities/Smart People – Guiding – Ideas

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- Smart cities are where **smart people** are.

- If people look to very long term this obviously need to consider sustainable environment, they have to plan the future of their city and region through an **integrative perspective.**

- Nature and life are so complex that no one can be smart enough to deal with them unless if their reasoning is based on simplified phenomena: the models, created by our mind through an effort of **abstraction.**

- Instead of a real person I can consider a drawing like that:
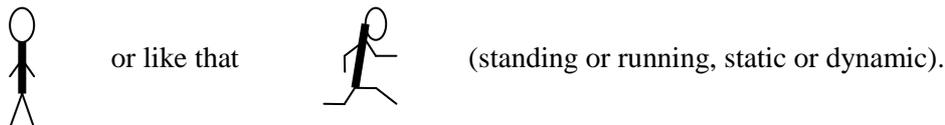
But I can still simplify the model: instead of it will be , or even ,

or just a dot

- Models must always be a function of the components to be represented, the issue we want to consider and our way to study. Create **your model.**

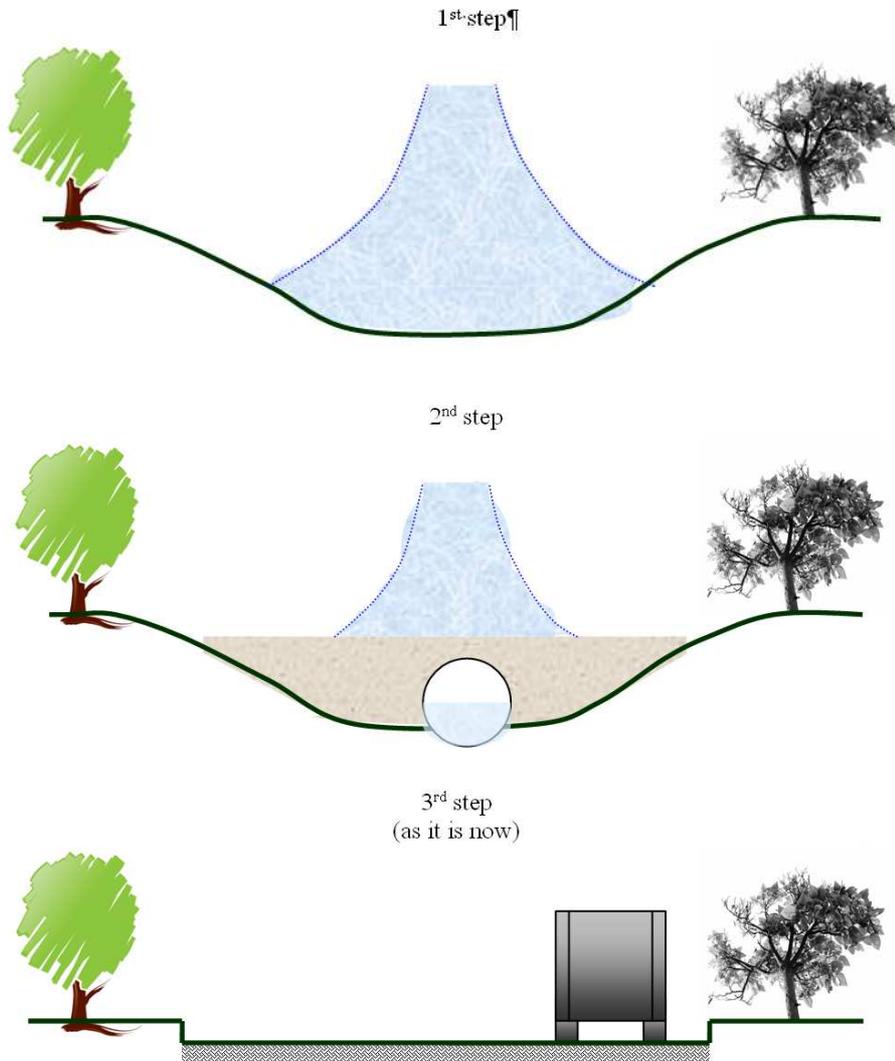- To study an integrative and sustainable city I must consider **all the territory around** it.
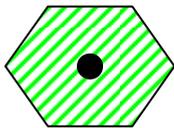
 , as life needs a balance between building-up areas and green areas (nutrients, resources, landscaping, ecosystem balance, …).

- Then one can take the **MM model** to study the area and to respect both the built-up city and the green networks. I also have to study in depth the bridges and tunnels to get continuity, the key device to attain our goals (see annex "MM Model").

- Some "smart" politicians think that to become smart it is good to avoid opponents, fighting them as much as possible! It is a wrong policy. Act like "judokas" that use the **strength of the competitors** on your own advantage.

- As a matter of fact, smart people understand that **associating** people around objectives is the way to get stronger tools and to get the desired results.

- Sustainability is not only connected with the ecosystem balance but also with the balance among social components and between population and social infrastructures. To get these balances and good accessibility we can suggest the M.C. model, using the linear system and "pearl collars" linear structures (see annex "**MC Model**").

- Dividing the city into **Organic Units** one try to reserve the space inside each one of them for pedestrians and bicycles, while cars would use the corridors in between the **Organic Units**. This helps to get liveable cities.

- Smart people will consider a permanent **monitoring** service, organising planning teams at each of the planning levels – community level, municipal level, regional level, developing the team

capacities for dialoguing and evaluating alternatives, and to find 3rd solutions where conflicts appear.

- Planning must always include the **short, medium, long and very long term** (the vltp…), where the long term can consider the sustainable aspects of development and the others respond to short and medium term human needs, easing citizens participation.

- Do accept globalization capacities but not loosing local character. It is good to frequently organize brain-storms for identity awareness. Besides the exercise of being aware of our identity look for a way of preserving local images – silhouette, symbolic elements, meaningful land marks, familiar signs, …

- Planners must not forget that citizens need both **privacy and social integration**. City spaces can help to find places for one or other purpose, depending on the time and mood.

- Planners must try to find **ad hoc solutions**, avoiding to bring standard answers everywhere. For instance: there was a little waterline bringing water until the sea on Sitges. To avoid thinking on the best landscape for this natural drainage device and to avoid problems of cleaning and conservation… a street was built over the natural waterline.

Previous situation:

1st step¶

2nd step

3rd step
(as it is now)

Proposal (tiles on the river bed steps and some landscapes):

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When is raining
(water cascade)

When it is dry – beautiful tiles on the river bed (steps)

- Besides plans, people need **education** and planning bodies can facilitate the access to information/education on
  - History
  - Ecology
  - Technology progress
  - Cultural values
  - Guided local visits
- Let us try to have a **smart strategy** to build smart cities:
  - Permanent education for all, supported by a strong local culture.
  - Open your culture to external approaches but be sure that this is bringing you a positive development – **be wise**.

- o C - After getting aware of local and global issues organize **planning teams** at each meaningful level.
- o D - Include town planners and politicians in **brain-storming debates** and select a group of experts on urban and regional planning.
- o E - Formulate a smart plan within a **smart planning system**, not so much based on rigid zoning and rules but with guidelines and strategic rules, for incentives and penalties, facilitating negotiations and planning success and follow planning implementation until urban design image and economic results.
- o F - Be aware of problems and risks and **share your awareness** with all the citizens – deep meditation is recommended.

- Believe that one can always find a **creative idea** to solve the problem, never give up!
- If you have no creative ideas **make a brake**, have some pleasure and come back to work with optimism – ideas will shine around you!

1 ANNEX – MM MODEL

The MM Model (or the Lace Model) solved the problem of respecting both the "continuum naturale" and the possibility of urban continual growth of Metropolitan Areas, avoiding the limitation caused by ring-belts and other territorial laws, and looking for integration. Main aspects of urban understanding on the space:
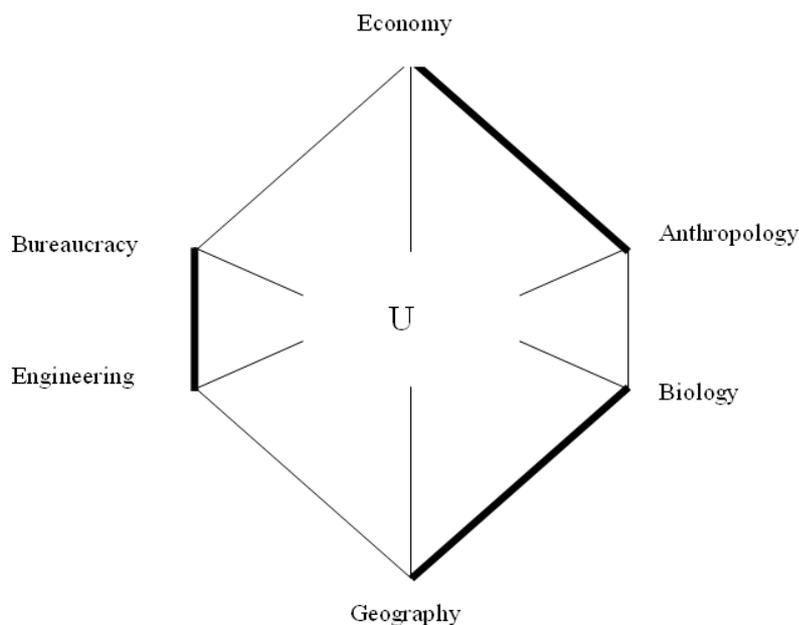

The solution is inspired on the lace work, where the space is only partially opened and partially closed by the lace material but can increase without any limit.

The key strategy is to build bridges and tunnels where ecological land will get continuity at the ground level and built-up areas will also get continuity at the upper level.

Main human dimensions:
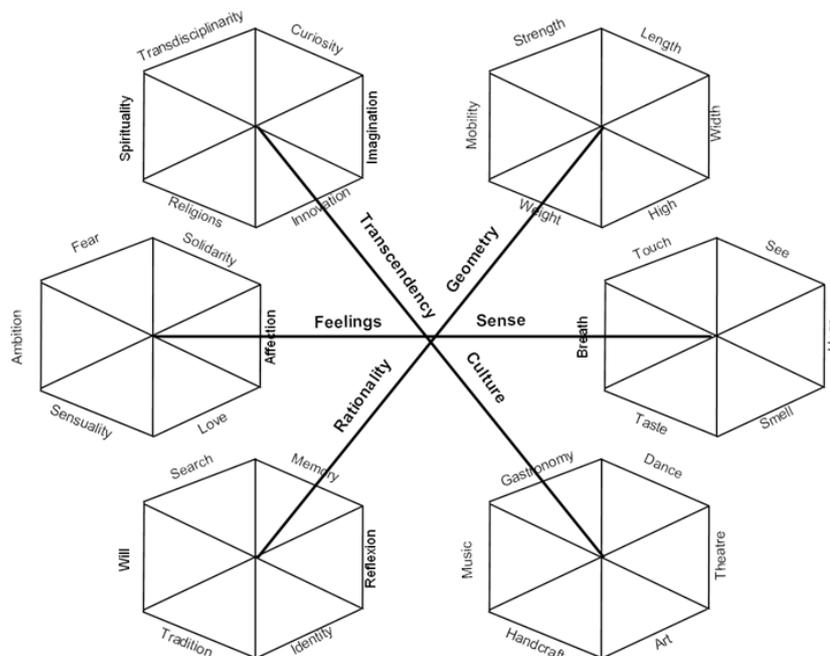
Changing the urban or region fabric (the lace composition, on the model) it will be possible to get unlimited shapes of green corridors and urban expansion, allowing nevertheless the development of an integration of cities within the green landscaped territory.
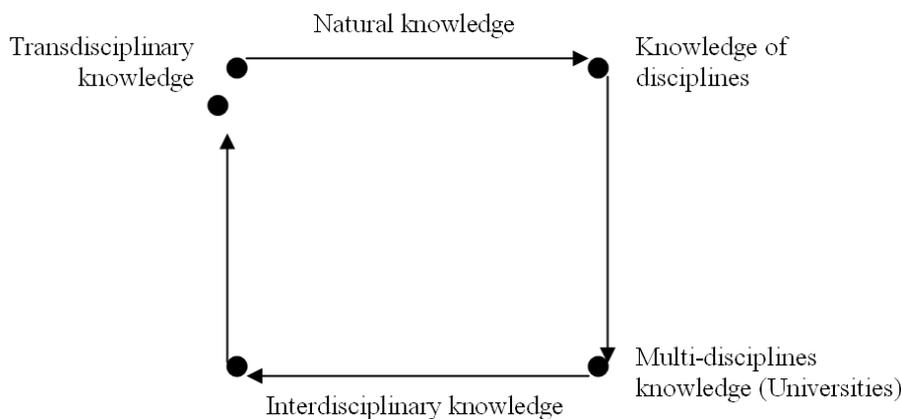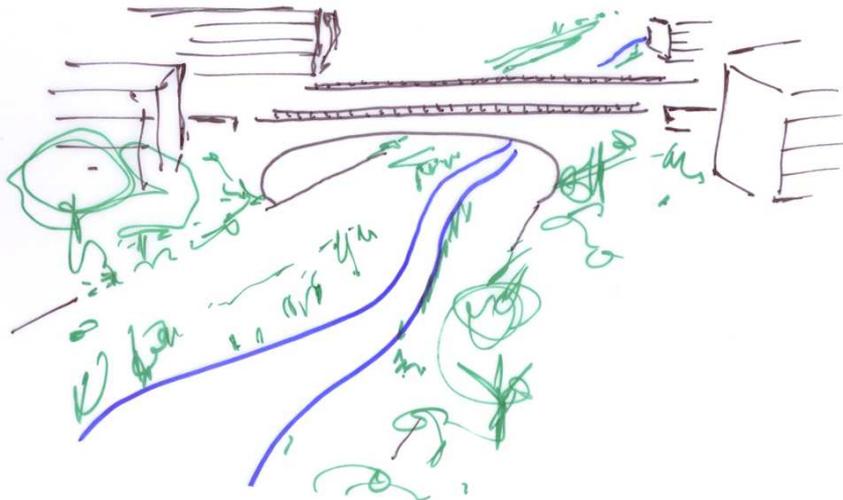

The drawing of cities must come from the natural potentialities and pre-conditions – the orography, the ecosystems, the climate…

Depending on these characteristics and on the general goals, the percentage of built-up areas and of non built-up areas will be fixed.
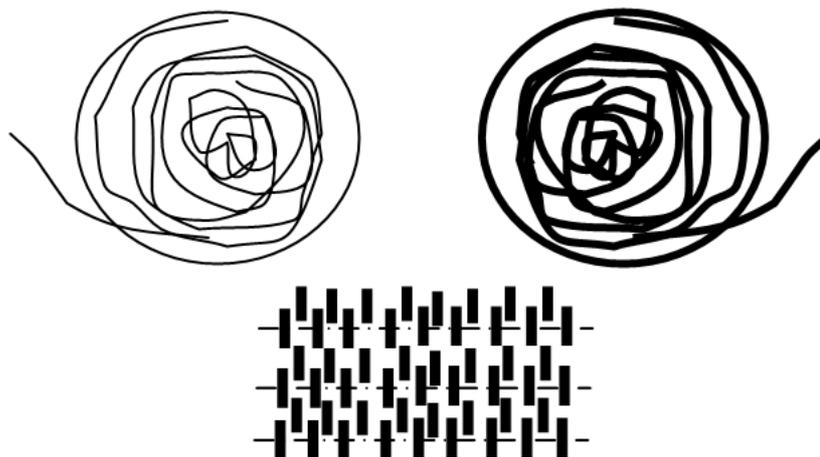
On a space of $\square$ = 6 km one can have a city of 500.000 inhabitants and 30% of green space with continuity, only with the expenditure of 12 bridges, allowing the flow of water, ecosystems life and pedestrians under the urban roads and urban structure.
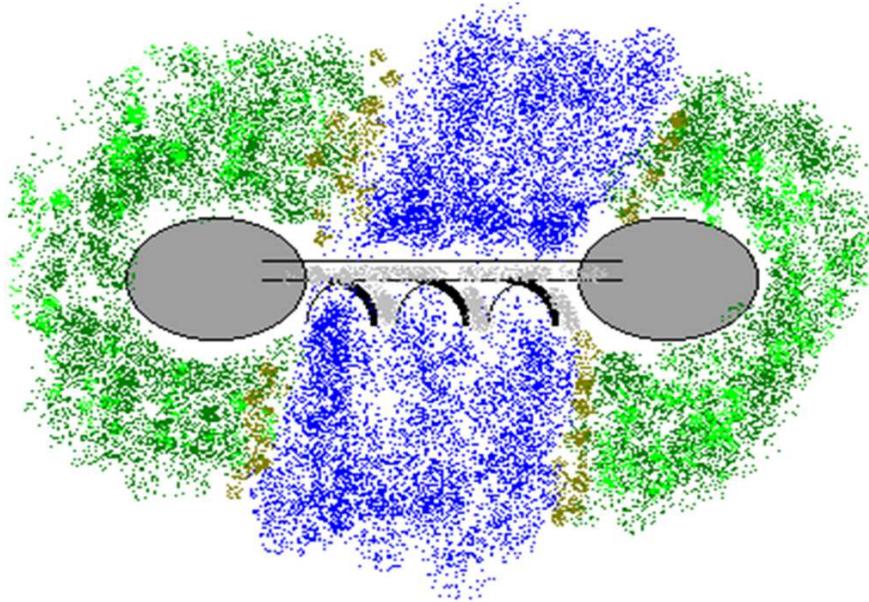
If a Metropolitan Area is located on a territory of a tropical jungle with big mammals, it is obvious that some bridge would have to be 10 or more meters high and may be more than 1 km long.

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2 ANNEX – MQ MODEL

The MQ Model (or the Linear Pearl Collar Model) does not necessarily asks for tunnels and bridges like the MM Model as the continuity of MQ Model lines is only based on limited distance between social infrastructures components, offering some space for crossing in between:

dn ≤ dm, where dm is the maximum distance to give continuity to the line.

d7 ≤ dm, means a rupture on the linear system.

Maximum distances have to be calibrated. As a reference on can suggest:

|	
Urban bench	d ≤ 500 m
Alarm phone for urban security	d ≤ 1 000 m
Sports informal facilities	d ≤ 2 km
Drinkable water	d ≤ 3 km
Meeting point and recreational area	d ≤ 5 km
Public transport	d ≤ 6 km

Etc, etc.

The maximum distance must be locally calibrated by the town planner and approved by local politicians and citizens.

These lines allow the crossing of different lines at the floor level, as continuity can be considered each time dn ≤ dm.
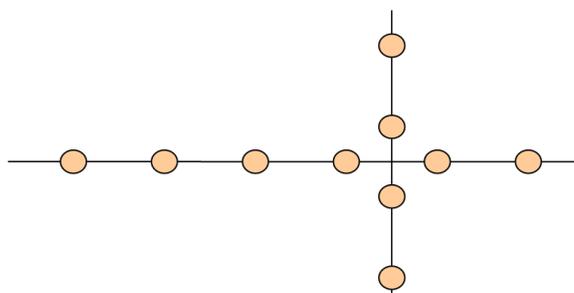

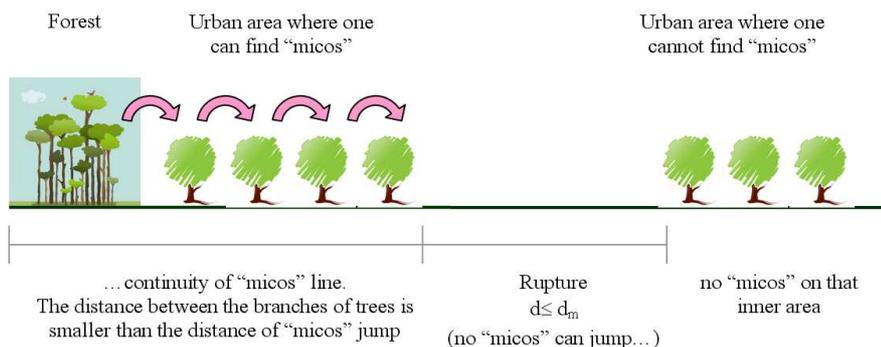The condition of continuity on the MM Model would ask for two levels device on each lines crossing:
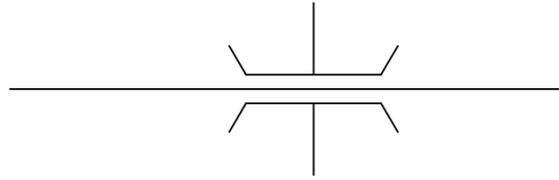
This is why on MQ Models the continuity of lines is considering "pearl collar continuity", analogy with pearl collars:

Pearl collar continuity   Discontinuity or rupture of the system

The MQ line crossing is obviously on the spaces between social infrastructure elements or "objects", to avoid conflict.

Like that: And not:

Conflict
between locations

rupture

Lines on MM are
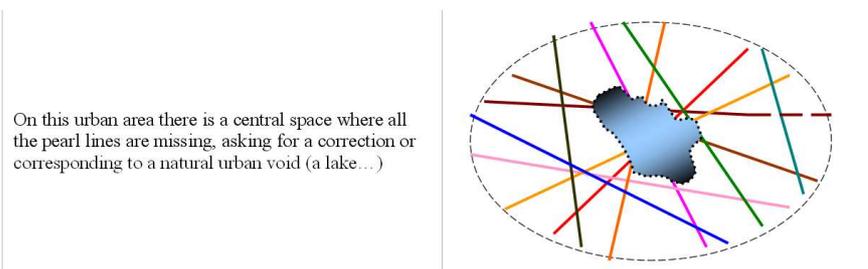
Lines on MQ are
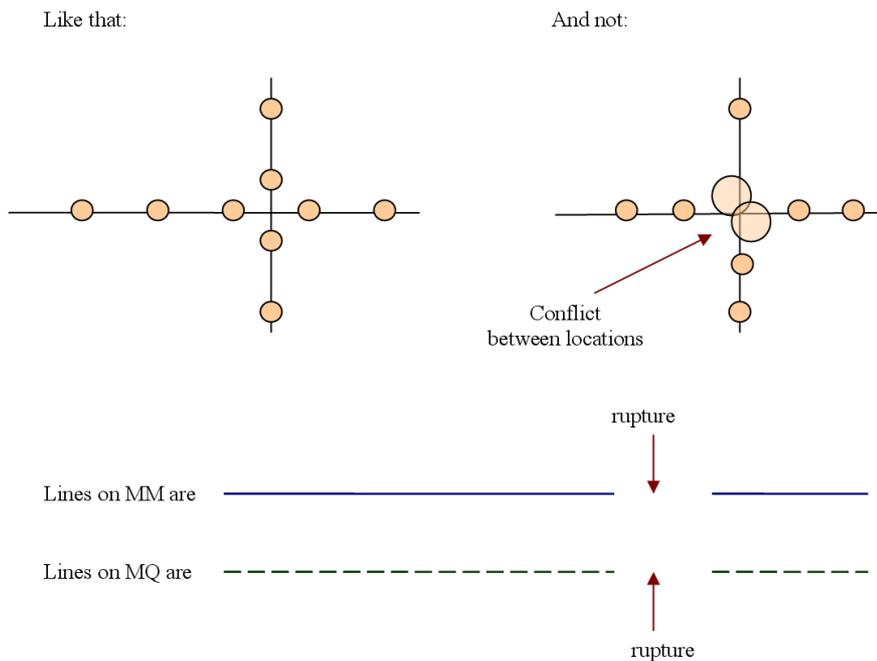
rupture

The continuity of Tijuca forest (Rio de Janeiro), taking the point of view of "micos" (small monkeys of the forest) can follow the avenues of the city until a rupture of that MQ collar pearl line:

Forest   Urban area where one   Urban area where one
              can find "micos"   cannot find "micos"

...continuity of "micos" line.   Rupture   no "micos" on that
The distance between the branches of trees is $d \leq d_m$ inner area
smaller than the distance of "micos" jump
                                        (no "micos" can jump...)

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This type of reasoning applies to every kind of urban function. Where dn ≤ dm, there is a continuity of these collar pearl line (corresponding to an urban function).

One can represent a city based on urban collar pearl lines. Some lines can have ruptures meaning a need of correcting that rupture by adding a new element of the same type or facilitating the access.

These MQ lines are normally ending at the urban periphery.

Some ruptures are represented by doted lines

On this urban area there is a central space where all the pearl lines are missing, asking for a correction or corresponding to a natural urban void (a lake…)
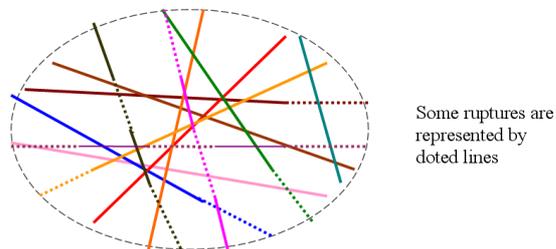
The plan can have the goal of filling all the ruptures and the lines study can also help to find the urban periphery, eventually incompletely infrastructured.

Pearl collar lines can consider different urban functions:

Education	Services
Sport	Bank credit
Health	Communications
Social meeting point	Civil protection (fire brigade)
Transportation facilities	Civil protection (police)
Culture	Points of view
Recreation	Water
Cult (religion)	Bench and rest space
Supply	Etc.

Great metropolitan areas can show systematic line ruptures showing the organic units frontiers.

Calibration of dm is very important and playing with dm levels one can get different images that can be helpful to define urban spaces taxonomy and to elaborate urban planning proposals. Marginalised settlements can be clearly represented on these images, but low density regions may have to be dealt with some generous values of dm, as economy of scale would not allow to have a denser provision of social infrastructure installations.