

New Development Practice

IMPLEMENTING GENERATIVE CODES

The Organizational and Procedural Framework For
Planning, Building, And Enabling The Use of Generative
Codes to Create Community

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A Field Guide for The Nature of Order

Preface

The use of generative codes and pattern languages is already widespread in the world. It has taken a new jump forward with the publication of *The Nature Of Order* since, by one count, the number of people working with these tools now exceeds 42,900, world-wide.¹ The number of people using pattern languages, first introduced thirty years ago, now exceeds 500,000.²

The proper use of generative codes introduces a number of deep changes in the practical substance of what is done. First, things happen in an unusual order, not in the order we are used to. Second, the work and involvement by different players is different from the tasks we expect them to do, and the way these tasks are normally packaged. Third, the whole effort, from beginning to end, is governed by human relationship: the relations between all the players, owners, families, businesses, builders, engineers and architects, gardeners, is different from what we have come to expect as “normal” in the mechanized process of development. Fourth, as far as possible, the profit motive is reduced. Of course money is used to pay people for materials and goods and services; but the subtle and corrosive presence of profit motive (often kept invisible in today’s procedures) is not allowed to dominate decisions. Fifth, the overall intention of the work, the target on which all members of the community and those that are helping to build the community are focused, is a sacred one, and it is shared. It is this last, distant target – the knowledge that our fundamental responsibility is to build and protect our Earth and everything that is built upon it, in a way that is holy -- which we keep in our sights, that perhaps plays the greatest role in making sure that it comes out right.

The specific topics raised in this report are all important. Ultimately, to bring full scale implementation, all need to be recognized in some degree. However, achieving that goal in full may lie some distance in the future. For the present, we recommend that people who are interested in working with this material, stop short of such a lofty goal, and find some way that is modest and practical, in which each of these chapters can be implemented in practice.

We have written the text, precisely to support people in this way. We have given, for each topic, a summary of what we believe to be the ideal solution in the long term. But, what is more important, we have also written each section in such a way that a modest but useful version of that chapter can be implemented, with real people, in the particular real circumstances of any community where it is being attempted.

Our main goal is that widespread use of generative codes starts, and starts in such a way that within a few years we may hope to see some version of these ideas guiding the process of community creation, and the healing of communities, in many parts of the world.

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Legal Foundations and Contracts

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Phases of a Typical Project

FIVE MAIN PRINCIPLES

P1 The Order in Which Things are Done

In current practice, there are many conventions of sequence, which have become part of the accepted wisdom, in planning, architecture, and development. For example:

- Roads are built before the buildings they serve
- Sewers are laid before the building are built
- Houses are placed, and the garden is whatever is left on the lot, comes second
- Windows are designed and positioned at the time the building's plans are submitted for plan check
- Drawings are completed before any construction work is done
- Neighborhood plans are completed, before any construction work is done.
- Public spaces are designed after individual buildings.
- Changes are done by change orders, and therefore become very expensive.

When a generative code is used, these same thing happen -- but they occur (of necessity) in an unusual order, not in the order we are used to. For example:

- Roads are built after the pedestrian structure, not before.
- Roads are built after the houses, not before.
- Sewers are laid after public space, not before.
- When houses are designed, the garden is placed (located) before the house volume is located, not before
- Construction work begins long before final drawings are ready, and the drawings develop, in parallel with the construction process.
- Changes are not viewed as change orders, but as part of the builders obligation, provided they stay within parameters of quantity and price.

These changes of sequence are not whimsical, but necessary. They are necessary, in order to allow a coherent unfolding, of the neighborhood, where the right things come first, and the lesser ones take their place in the context provided by the major things. The “right” things, are the ones which have the biggest impact on the environment from a human and emotional point of view which is capable of making people healthy because their deepest feelings are respected..

P2 Re-arrangement and Re-clustering of Tasks

A second aspect of the current mechanisation of neighborhood creation, lies in the fact that the packages of effort – the tasks as defined by the industrial machine – are defined for the convenience of the developer (architect, contractor, financier, etc), but are not chosen as natural wholes in a community whole-seeking process. Again, this cannot but fragment the resulting neighborhoods. Of course human community cannot be created in such a way.

For example, one cannot easily define the rooms in an apartment, on a paper plan or on a plan in a computer. What matters, the places best suited for rooms, and their best dimensions, depend on relations with views, width of outdoor space, direction of the sun and so on. All these things can be appreciated best, by a person who (a) will live in that apartment and (b) who is standing in the place where the apartment will be as the layout of rooms is attempted.

Such a down-to-earth and common-sense view of what to do and how to do it, requires a reorganization of people's tasks. The framer, or block mason, need to be on site, at the time when the family have shown (with chalk marks or sticks), where they would like the walls to be, so that they work directly from the feeling-based decision made by the family, not made rigid by adherence to codes. This process may be mediated (for practical reasons) by an architect, or by a project manager – but in any case, it is an entirely different process from the one in an industrial production scheme.

The same type of problem can occur, in an even simpler process – the moment when a house owner or apartment owner wants to choose the position, size, and extent of a patch of outdoor garden or terrace which is going to be the private outdoors for that apartment. This is very fundamental process, which may need to interlock with the signing of property documents, precede location of potential service lines, and be inconsistent (if wrong timed) with the usual condition of a site made ready to receive large concrete mixer trucks carrying and unloading concrete.

The same thing occurs again and again, through the building process. A process must accommodate the natural groups of cooperating men and women so that those who have the natural right, or natural ability, to make a given decision, can be gathered together at the right time and place, and above all at the right

moment in the overall management process, so they can do a job well, and do it cleanly, efficiently, and fairly fast. Clearly this requires a different conception of project management, from the one in practice in the typical organization of large scale housing or office projects.

P3 Human Relationship As The Foundation Of All Work

Ever since the period about 1900, when Henry Ford's time and motion studies led to the mechanization of all work, the inherently human task of conceiving, and laying out, and planning and building neighborhoods has, also, been redefined as a mechanical and bureaucratic task. It is not surprising that recent riots all over France, have arisen in protest against the inhuman concrete beehives where people are now expected to live.

A neighborhood is a human organism, a community of people, living, and working. It is above all a place to belong to. But it cannot be a place to belong to, unless it was made by a recognizable, and deeply shared human process, so that something was created which people feel a desire to belong to, in which people feel a natural inclination to be there, and draw comfort from the fact that they are there, that their children are there, their gardens are there, their work is there. Such a human organism can only be brought into existence by nurturing whatever seeds of community are there to start with, and then increasing bonds of mutual reliance among people who trust each other, and who mean well by each other. These strands of social comfort must include, too, all those who are involved in the making of the neighborhood through time. Mechanical adherence to sets of plans drawn up hundreds of miles away, and carried out by people who have no stake in the place, just will not do. It cannot possible help to nurture community, or heal and protect and comfort human individuals.

To do it right, and to build housing well, every step, every technique, every process must be defined and framed, so that it is, at root, a human transaction that is taking place. The process of thinking out, and building, a human

community , cannot be viewed as a production process. If it is, it will surely fail. If it is seen and defined as a process of creating and building relationships among people, and if this criterion is applied to every act that occurs during the life and process of community construction, then it can succeed.

P4 Reduction and Removal of the Current Profit Motive

Historically, there was nothing harmful about the name “developer.” It simply meant a person who lent his efforts to the good of the community, and to help the community grow in a way that was of benefit.

Historically, the word “profit” also had little that was harmful. The old meaning of the word was “benefit to the soul or benefit to the community” in much the way suggested by the phrase “what profiteth a man if he gain the whole world and lose his own soul.”³ In 17th century Puritan New England, everything was done for “profit.” That was the original meaning of the American focus on “the profit motive.” But what it meant, by profit, was that an action profits the soul of the person or group acting – it was not viewed as anything to do with money, it simply meant that the action would bring profit to the community, in the deepest sense: that it would enhance their well-being and health of the soul.

In 20th-century practice and in present 21st-century practice, the motive of “the bottom line” became a corrosive force, which has undermined almost all aspects of community, and which undermines all efforts to make our land beautiful, whether it be natural land or land in a city neighborhood. It corrodes motives. If a manufacturer of solar panels seeks to distribute these panels and introduce them into the roofs of houses and buildings, it is very easy for the honest desire to help the energy problem to become contaminated by the desire to sell these panels, without considering the beauty and tranquility of the place that is going to be built. The two motives are then so intertwined that the people who carry these motives can no longer see them clearly, and may easily lose their way, and lose their ability to focus on the harmony of the place which they are trying to build.

The present too-cosy partnership between city governments and private development corporations is a large scale version of the same problem, and

plays inevitably a role in destroying community. Excessive concern for the bottom line, and for the shareholders profits, can then lead to efficiencies of scale, materials, and timing, which ultimately generate housing projects that are disrespectful of people and disrespectful of land.

It is difficult to replace this pattern of motives, which lies so deep in our present society, and to remove the modern version of the profit motive. It cannot be done all at once. However, it is important that every housing process, and every development process, be most carefully scrutinized by cities, borough councils, and planning authorities, and that all possible opportunities to turn the work of building and community development, into a non-profit stream, be pursued.⁴

We shall see, in the detailed definition of operational principles, that the focus on profit can be replaced by a more careful use of money, by a more finely tuned attention to spending, and to categories of spending, which have an inherent control over money, not in order that profit may be drawn from the project by outsiders, but rather so that money may be spent and distributed within the project finances, in such a way as to get the most benefit for every pound and dollar. See the sections on program budgeting and allocations of funds by line items.

P5 The Holy: A Necessary Guide When Shaping Land and Place

This principle is the most important, yet at the same time undoubtedly has the potential to be the most controversial.

It has nothing to do with secular religion, or church religion; it is not inclusive of church going people, or exclusive of non-church going people. In the 21st century, there is a need for people to work, individually, and sometimes together, towards the good of the whole. For some this may mean the world, for others the neighborhood, for others the universe. For some it may lie in the protection of a very small flower. For another it may have to do with the devotion of everyday work. It is, in any case, a striving toward some greater thing, greater than the individual, and it is a state of working in which the desires and of the individual are, slowly perhaps, replaced by devotion.

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Traditionally this devotional state has been thought of in reference to God. Once again, the issue of union with God, or the sacred, is not something to do with any particular religion. It has to do with a state in which an individual, or a community, are voluntarily bound in devotion to the good of the place, and work, and people, who are involved with them.

There is now a growing feeling among many scientists that the ancient idea of God may be an aspect of the universe, and that one day in the future we may see and understand this aspect as the vital underlying force of all nature. More important, there is a growing recognition among architects and planners, that this aspect of the world cannot be ignored, and that the creation of buildings, or neighborhoods, will succeed as a human endeavor, only to the extent that people working – all the people – families, craftspeople, financiers, ecologists – are able, and willing to make themselves humble, and be guided by the good, and by the life of the whole.

Thus, this target removes individual vanities, and allows us to focus on the deepest aspect of what we are doing, without greed or shame. To the extent that we are able to reach this humility, the good of the neighborhood is most likely to flourish. We are therefore most likely to succeed when we choose to uphold this way of thinking without prejudice.

If we are fortunate, we may find that the land we protect, and the community we create, and our effort to give beauty to the place and to the land, and to keep the beauty that is there, and to enhance it at every moment that we can, is the deepest form of worship.

THE ORGANIZATIONAL AND PROCEDURAL FRAMEWORK

1 The Range of Circumstances

The idea of generative codes, and the generative process, applies to virtually all places where a human community is trying in one way or another, to build a habitat for themselves. It applies to almost all countries. It applies to people regardless of wealth, they may be rich, or middle income, poor, or destitute.

The community may be hundreds of years old, or it may be brand new. It may be heavily urban and high density, or it may be rural. It may be in an economically developed nation, or it may be in a place that has hardly begun development.

The rebuilding of the community,

The action contemplated may be repair of an existing community, it may be building a new community from scratch, or it may be adding on a new neighborhood to an existing community.

The initiative for the reconstruction may come from the people who live and work there, or it may come from the government, or it may come some other outside agency.

The money may come from within the community or it may come from outside.

But regardless of these circumstances, we may say that in whatever action is to be taken, some things should be respected.

- All the people who now live there and who may come to live there are to be respected.
- The land is to be respected as sacred, and is to be made more sacred.

2 Selection of A Piece of Land

Early on in the process, the piece of land where a new project is to be contemplated, has to be defined, in human terms as well and qualitative and geographic terms.

- The people who live in the community already
- People who live or work in places adjacent to the community
- Green site or brown site
- Special features
- Precious places
- Land form (flood plain, etc.)

Selecting land on the basis of which land needs improvement to improve the whole.

3 The Organization of Authority

The creation of urban land or of any human-made landscape, is inevitably, in part, a matter of authority. The result of whatever actions are taken, will depend, inevitably, on the distribution of land, the kind of **authority implicit in the architecture***. It is, nowadays, in an odd sense, a great unmentionable. Yet it is still real, only rather veiled. The authority of the Deputy prime minister is present in every decision. Yet he knows little about the considerations that will make a humane environment. The authority of the large scale land developers like Trump in the US, though recognized by the news media, is again a great unmentionable. It is hidden, or not spoken of, because it would be absurd to give to Donald Trump, the right of control and definition, for lives of many people.

The connection between architecture, public architecture, and authority, is something which should be more explicit. This topic has been raised in an eye-opening way by an architectural historian.⁵

*needs explanation – Brian, help!

4 Who Defines the Problem and Sets Target Density

At the outset of any project, someone sets the agenda, or makes a proposal. The initiative can come from a local government, a city, or a municipality. It can come from private money and a piece of private land, where someone hopes to see a new community, or to make a great deal of money.

In present conditions the target densities, and the decision to build or not, come indirectly from the central government and the office of ODPM, acting through the regional plans which establish levels of construction that are quotas or targets. This is not the way to build a better world.

The places where new construction should be placed, are those places whose use for building will not damage beautiful land, land that is useful for agriculture, important historically and so on. In short, the primary consideration, is that the placing of new construction does not do harm.

The monetary considerations which give each landowner the right (and an equal right) to make money from the land they own, has led to an absurd upside down set of criteria, which do not benefit the land as a whole. Equally, the willingness of beautiful old estates to sacrifice their beautiful land, in order to make money from housing estates, is also not in the best interests of the country, or of the region.

So, the decision to use a certain piece of land, should be based on the overall wellbeing of the region. It is as much a decision of what to leave alone, and not destroy it, as it is of what to use for new construction. This should never be a process which is based on people's ability to make money from the decision. It must be a decision based on the common good.

5 Necessary Players

Within the framework of this generative process, the involvement of the following people should take place:

- The people who live in the community already
- People who live or work in places adjacent to the community
- People who can be identified as wanting to come, or intending to come, and live or work in the new places that are to be built, or repaired, or refurbished.
- People who live or work or own land in neighbouring areas, adjacent to the land.

- Local authority planner assigned to the land
- Local authority architect responsible for urban design and public space

- Ecologists
- Public works engineers
- Riparian ecologists
- Soils engineer

- Financiers
- Financial planners

- Craftspeople
- Masons, Concrete workers, carpenters
- Gardeners
- Roofers
-

6 Dynamic Decision Making: A Summary of Generative Codes

In contemporary planning practice -- architectural practice, and development practice -- it is commonplace to accept the idea that one must see the whole of a project, in its entirety, before embarking on implementation. However, this is not the way that growth of healthy, living systems occurs. In living systems of almost any scale, the growth happens slowly, over time, and during the slow growth, decisions are being made continuously, day after day.

To undo the mistakes of the last fifty years of development practice, this practice must be replaced by a dynamic process, in which real people make real decisions, day by day, and the process continues today, on the basis of the decisions made yesterday.

This is a frightening prospect for many. It is frightening because in this dynamic process, all the participants must trust that the decisions made today, can be relied upon. It is, in principle, frightening for a building department, frightening for the planning department, frightening for banks and lenders. All these institutions are used to the idea that in order to protect everyone, the entire project in all its detail, must be scrutinized by everyone in paper form, before any action be taken. Yet it is precisely this notion which has so catastrophically harmed our communities. Biology, anthropology, systems theory, and common sense all tell us that we can never know enough to make all the decisions in theory, before acting on any of them in practice. The result will only be satisfactory, if the decisions are indeed taken step by step, each one taken as a small matter that can be decided with certainty.

A generative code specifies a step-wise process, which allows decisions to be made, slowly, by all the relevant people involved, and in which there is no backtracking -- so that the resulting configuration unfolds smoothly.

By committing to this process, the result will not only be far, far better than the result obtained by the normal one-shot process. It also offers a guarantee of better decision making. The generative code is based on thirty years of experience, in working in this manner. We can state, with reasonable professional certainty, that when decisions are taken in the order provided by the generative code, the right decisions will be possible, and no money will be wasted going back and forth, and in general change orders will not be needed, thus greatly controlling cost.

7 Respect for Land

Finding the precious places, and bearing mind the process of enhancing them.⁶
Pattern languages as tools for making these diagrams.⁷

8 Ownership of Land

9 Involvement of People Who are Affected, On Behalf Of The Group

The formation of community. See Book 3, chapter on forming collective pattern language, and creating common places as public space.

9A Involvement of People, Families and Small Businesses as Individuals

Uniqueness of houses, rooms, gardens, entrances. See Book 3,
chapter on uniqueness.

10 Project Leadership

Who are potential leaders?

Leadership practices that are useful.

11 Undoing the Role and Title of “Developer”

Historically, there was nothing harmful about the name “developer.” It simply meant a person who lent his efforts to the good of the community, and to help the community grow in a way that was of benefit.

12 Role of Local Authority

13 Non-Profit and the Profit Motive

14 Finance and Money Flow

Budgeting?

Example budget?

What replaces going to get a loan when they need it?

Anything from Michael's points on finance?

15 Risk

Different ways to cover the risks, as discussed in Bristol with Under the Sky.

16 Construction and Contracting

Examples of construction contracts.

17 Architect's Role

18 Project Management

19 Key Procedural Details

20 Authority and Who's in Charge?

21 Methods of Surveying

22 Previous Innovations Which Have Been Tested and Verified

23 How the Project Meets its Difficulties

24 The Necessity of Experiments as a Daily Habit

The success of a neighborhood and the buildings in it -- as living things and as living places -- all depends on their reality. That means, on the reality which is achieved there. Every part must be positioned, shaped, and refined by real practical necessity, and by subtle attention to real feelings. These feelings originate with the people who live and work there, and will most often be shared by other people who pass through, or come to live there as well.

There is only one way for a building, or a neighborhood, to reach that condition: through experiment. Each feature of the place, the height of a wall, the position of a garden gate, the width of a gate, the distance of a fence from a certain tree, the height of a ceiling, the color of the ceiling, the outline of the structural members which is visible in the ceiling, the height of a window, the width and depth of the sill . . . all these things can be examined, thought about, tested by a thought experiment, or by physical experiments in which we make a mock up or put a stick in the ground, and see if it is in the right place, if it gets better or worse, if we move it a foot to the left, or to the right. . . . The essence of such an experiment, is that you put it in place, and check its effect, and check your feelings that arise in the actual physical configuration.

Experiment until you find it most comfortable -- the most real. This can be done in a matter of minutes. If you are in any doubt about how to conduct such an the experiment, or how to make the judgments which tell you the result of the experiment, you may get practical advice from *The Nature of Order*.⁸ But what matters most, is that experiments become second nature to you, and to everyone who is trying to make judgments and decisions in the configuring of anything in the neighborhood.⁹ That people in the neighborhood are all used to it as a way of going about their daily affairs, and, bit by bit, making their environment better.¹⁰

Uniqueness and human variety

25 Evaluation As A Continuous Operation For Every Step

Material from Michael's 4 November note

I think the heart of it is this step of qualitative evaluation.

That is, there is a rule of thumb for how the people recognise and incorporate qualitatively some whole needing protection, repair, articulation, enhancement, etc. And how they translate that into a bit of information about what is to be done, to be used by subsequent steps. (Say, "preserve view of Rochester, and align buildings to capture it." And this could be shown graphically, as Chris has done.)

Then, that evaluative step itself needs to be evaluated, in terms of its fit with the whole.

That is, at each step, before proceeding to the next, it is central that there is a check, a kind of "peer review" of the process, before it gets added to the code output and sent to the next stage.

LEGAL
FOUNDATIONS AND
CONTRACTS

A1 Agreements

In order to implement the principles that are loosely described in the preceding sections, a number of fundamental agreements must be in place. Without an understanding of these agreements, people might find it difficult to know whether they subscribe to the principles or not, and whether they wish to work towards them or not. Having a written form of the agreements, makes it possible to reflect on them, and decide whether they, or some modified form of them, would be just and acceptable as the basis for a community's existence.

Still more important, these agreements also provide the practical **engine***, through which a group of people may organize themselves to undertake community development, in their own area, or near their own area, with the participation of the necessary players in the local area.

*machine metaphor – find a better word: assembly?

A2 An Agreement Establishing the Land

In order to enter into agreements with individual owners, families and tenants, **the land itself – more properly** (?), the land, people, and properties resident on that land, must form a corporate body, which is capable of entering into agreements.

Further, it must be a very flexible kind of entity, which can be applied to large tracts of land, to groups of lots or parcels, and to individual lots or parcels. And, this new kind of entity must be of such a nature, that it can include pieces of land which have a variety of types of ownership, that can be embedded in this new entity, without losing their present status.

Incorporation of a Land Trust

Information about land trusts, in the UK, can be found at the LTA¹¹, and in the United States at the Land Trust Alliance.¹² It is proposed that the land which represents the extent of the project,

Material from Michael's 4 November note

Also, more seriously I think, it doesn't yet show us how the project is and must be set up economically, who the participants are, what is their stake in the project, what power do they have in conventional terms and how is it re-structured in this particular "game" to ensure they are playing it in accordance with the code, and not going to derail the process in any of the usual ways.

This is where I do think we have some more significant work to do... I confess I am not satisfied that the "project manager" model solves all the problems, nor does the "insurance" model. I fear they both may simply move the problem to another level, where it can be equally troublesome.

A non-profit developer helps. But those are not very thick on the ground, of course. More intriguing to me would be something along the lines of a Neighborhood Development Trust – something set up by the local authorities as an independent public entity, and that the local authorities retain a stake in, in exchange for their contribution of the land. Then the various families that

come along could also buy into the Trust, with a down payment on their interest. But the local authority launches a legal management structure that then has the force of law behind it, as well as contractual obligations. And that includes the code.

The developer could then be simply working for the Trust. Or it could even become a stakeholder in the trust, if its rights to any profits were entirely structured by the Trust and its code and project management process. It would be securitized by the share of the trust, which has a real asset – this growing community.

Again, the Trust would be the owner and authority over the land, and would administer the code, manage construction, manage the property, etc. The residents would continue to be stakeholders and beneficiaries of the Trust, gradually buying out the shares of the other stakeholder/beneficiaries.

Funding might come from a variety of sources, but would take on a very different complexion. It could be done by the local authorities themselves, in the form of municipal bonds or other tax-backed debentures. Then the buyers of the bonds would become non-voting beneficiaries of the trust, receiving a small but government-backed return.

Or it could be done by charitable organisations not seeking a return. Or various other financial vehicles, wanting to invest in the improvement of a community. In any case, the residents would gradually buy out the other shareholder/beneficiaries, until they owned a family share free and clear (equiv. to a house). The actual legal ownership of their house would probably be structured through some legal condominium arrangement, perhaps as a subsidiary entity of the Trust.

One can readily see that this needs a lot of work. But I think this kind of instrument – the "bubble" we've talked about - is crucial to solving the usual problems that derail such a process: debt, developer control, local authority control, special interest, individual financial interest, etc.

A3 Agreements about Land Tenure and Ownership

A4 Agreements about Money

A5 Agreements about Subsidies Needed to Trickle Charge the Process

Some families and businesses will need financial help. Some may need help, simply to pay into the Land Trust, and thus giving themselves a leasehold. Some families have so little in the way of cash reserves, that they may be able to give themselves modest amenities, by working with their own hands to achieve what they need, over and above a basic shell. Other families will not be eligible for loans.

In addition, families and businesses will need money to give themselves the particular things they need, which do not fall easily into the standard model of what is bought and sold.

The land trust will obtain subsidies from Local Government and Central Government, which may then be disbursed to owners and tenants, in a way that gives everyone the lift they need, to start out in life.

A6 Agreements between the Community and Local Authority Public Works

Service contract and budget contract, between the local authority, and provision of the following services, in proportion to the size of land, density, and nature of land use.

- Roads and road mending
- Mains water or equivalent
- Bridges and culverts
- Parks and recreation
- Sewers and manholes
- Retaining walls

A7 Agreements about Connection to the Land

A8 Agreements about Control

A9 Agreements with Central Government

PHASES OF A TYPICAL PROJECT

Stage One. A Gleam In The Eye.

A few individuals begin to have an idea about doing something. This initiative can come from an individual who has some land, from a community group, from a local council or borough council, from a local business group, even from the central government. It could also be spawned by one of many NGOs that concern themselves with housing, small business, ecology, sustainability.

Notes: Michael #1; Project Organization. Define project, initial assessment of rough densities, housing types, business types, special considerations. **CRUCIALLY**, create legal entity to administer and control project and its code (Neighborhood Development Trust or whatever...) (Run peer-review check and modify if needed.)

Stage Two. Attention Begins to Focus on a Particular Piece of Land

Perhaps the most important thing that happens next, is that different possible candidates for land, are examined, and are assessed for feasibility. But even more important than feasibility, is the issue of whether the selection of this piece of land, will have a healing effect on places around it, or not. Not all land is good for development.

Note: Ideally, in the long run, the selection of good land for development (i.e. land which is not in good shape now, and which can only get better and heal the area around it) as a fundamental process, would change legislation about rights to develop, and altogether change the complexion of zoning, regional master plans and so forth.

Notes: Michael #2; Write the overall code structure for the project, based upon the assumptions above (these can transform and adapt, of course). Roughly lay out the cycles, based upon the complexity of the site, and rules of thumb (that we will provide in our code guide). Run simulations with role-players and adjust. (Run peer-review check and modify if needed.)

Stage Three

Stage Three: Gather up detailed inputs. Research the social, economic, environmental, legal constraints and conditions. Do thorough social surveys, demographics, economic assessments about employment, retail etc., and other research on the project as needed. (Run peer-review check and modify if needed.)

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Stage Four: Gather up the actors for the first sequence of cycles. Include at least some residents-to-be, or, if impossible, some suitable proxies. Include neighbours, government representatives, "experts" (designers, engineers, social scientists, environmental scientists etc), and – crucially – developers and builders. Educate them about the process and the parts they will play. Allow them to comment on the process, and make adjustments if agreed. (There will need to be a structured, peer-reviewed process for such decision-making, and indeed for all decision-making.) This Stage corresponds very roughly to the introductory period of the Strood Workshop.

Stage Five: the urban design cycles. This is the heart of the process for the neighborhood, and corresponds most closely with the urban design process laid out in the current Strood Unfolding document. The key difference is that groups of people will do each step, and use a peer-reviewed assessment methodology to make each design decision. (I can imagine several methods for this – e.g. the "peers" could be architects and urban designers, shadowing the teams and verifying or sending back the results.) (Run peer-review assessment of various social and environmental criteria, and modify if needed.)

Stage Six: the detailed house and building cycles. As home and business owners come into the picture, they are assembled into clusters following their rough positions in space. Then each cluster works together with the builders to finalize the shell construction. (Run peer-review check and modify if needed.)

Stage Seven: construction and final embellishment. This process corresponds most closely with Chris' successful projects with clients, where a builder with a capable designer works with clients to establish the detailed build-out, using sophisticated computer ordering processes and just-in-time delivery methods to keep efficiencies. The cycles continue, following a more conventional shell – build-out-interiors – landscape sequence. Peer-review check is in the form of the continuous monitoring through the construction management process.

Stage Eight: Management and minor adaptation. This stage is in the hands of individual residents and business owners, who can do their own work but follow any relevant parameters of the code. The legal entity (neighborhood trust e.g.) maintains resources for this work, to ensure compatible materials at efficient prices. Peer-review is in the form of neighbourhood self-government...

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Notice that at the core of each of these stages is a series of cycles that culminate with some kind of "peer review", coordinating with what has come before, with the wholes at different scales, and providing further information to make that happen should it not be happening. With this essential subroutine, the whole structure can be constructed at whatever scale needed, with however many stages needed for that scale. This is a neighbourhood scale, of course.

This sequence of stages may seem unwieldy, but in fact it is no more cumbersome than a typical project these days with all its phases. It's just that this one is new that

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it might well be intimidating for all the usual suspects on that level. But if we stress that the core methodology is a simple cycle, that is then applied to whatever scale of project – and that this neighborhood scale happens to be a very complex one – I think we can show that at its heart is a very elegant little creature.

Notes

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- 1 As of November 5, 2005, 42,900 references are made to this topic on the web.
 - 2 As of November 5, 2005, 500,000 references are made to this topic on the web.
 - 3 "What is a man profited, if he shall gain the whole world, and lose his own soul?"
—Matthew 16:26
 - 4 One most important example is provided by John Ponting's work in Bristol. John and his associates have recently created a non-profit development company, Under the Sky, which aims to undertake development pay for all costs, and overheads, but without containing the motive of hidden windfall profits as a major part of the behavior of the company.
 - 5 Brian Hanson, *Architects and the Building World from Chambers to Ruskin : Constructing Authority*, Cambridge University Press, 2003.
 - 6 Randy Hester, (1993) "Sacred Structures and Everyday Life: A Return to Manteo, NC. In *Dwelling, Seeing, and Designing: Toward A Phenomenological Ecology* (ed. David Seamon). SUNY Press, 1993.
 - 7 Thomas Erikson, *Pattern Languages as Languages A Position Paper for the CHI 2000 Workshop: Pattern Languages for Interaction Design*, IBM T. J. Watson Research Center 2000.
 - 8 For experimental criteria, please see chapter 9 of Book 1, especially chapters 8 and 9, pages 313-70, where you can learn how to assess the extent to which one configuration or another does most to support the inner life of your soul.
 - 9 See discussion of the Upham house, Book 2, appendix, pages 590-632, where there are dozens of such experiments described, one after the other, as they happened in the building of that house..
 - 10 See NOO Book 4, page 118-131, and Book 3, page 666-68, for succinct examples of an experiment, and how straightforward it is, how plain and ordinary, and how quickly it brings results which can be relied on and which are lasting.
 - 11 Land Trusts Association LTA online lta@landtrusts.org.uk Tel: +44 (0) 1243 818201
 - 12 Land Trust Alliance, <http://www.caledonia.org.uk/socialland/>