

# EuroPLoP 2013: Focus Group on Culture

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It began, as so many things begin, with a story:

“Many Agile teams hold short morning stand-up meetings. These may be different if people work in cubicles (e.g. in the US) or in open plan offices (e.g. Europe), have a dedicated team room, or are distributed across locations.”

Allan wondered more and more, how many of the “agile” practices were sensitive to cultural differences and national norms?

And Lise wondered: how did other aspects of culture affect development teams?

Once you start to think about it culture is a huge subject: nationality - home nationality, adopted nationality, embedded nationality; age, experience, industry culture, startup v. established, corporate v. small, etc. etc. So we decided we should hold a focus group at EuroPLoP to better understand it - not that we even hoped to come up with a complete understanding!

This focus group set out to: **understand how culture - whatever that may be - affects the way teams develop software.**

## Set up

The focus group was based around Dialogue Sheets. These are large A1 pieces of paper pre-printed with instructions and questions, and thought provoking quotes and graphics. The sheet is shown in figure 1 and copies of the Culture Dialogue Sheets will be made available to download from <http://www.allankelly.net>.

There were enough focus group participants to form two groups of four. Each group worked through their own sheet taking a little over an hour. At the end of this time the two sheets were hung up - see figure 2 - and each group talked the other through the major discussion points on their sheet.

## Discussions

It is not possible to capture all the discussion points that arose during the exercise but we will try to summarise what we can in this section. What

**Culture - Dialogue Sheet for EuroPLOP 2013**

[www.dialoguesheets.com](http://www.dialoguesheets.com)

**1. Start here**  
This is a dialogue sheet, it is designed to promote good conversation. Team members should seat themselves equally around the sheet so each question can be read by at least one person easily. Take one question at a time, **skip questions if you like**. The person closest to the question should read out the question and take notes of the discussion. Each person should get a chance to read and note at least one question.

**2. Set up**  
Agree how long you will spend working on this sheet and write it in this box:

**3. Define culture**  
Discuss what you mean by culture, explore the concept.

Make sure everyone has a pen to write on this sheet!

**4. Examples** - Do any of you have examples of culture you would like to share? e.g. when culture made a difference - good or bad? When it confused?

**5. Out of culture** - Have you ever worked or lived in a culture different to yours? What changes for you? What's harder, easier, older, age? What was different? What was the same? How did you cope? And what did you learn?

**6. Divided?** Can any of you remember when different cultures have worked together?

**7. Culture clash** Have any of you seen this? Discuss the pros and cons of working in a different culture.

**8. Traditional development** Identify ways in which traditional development differs between different cultures (e.g. waterfall based)

**9. Agile practices** How have you seen agile practices used in different cultural environments?

**10. Forces?** What forces are at work that impact agile practices?

**11. Change?** Have you ever seen culture change? What happened? Why?

**12. Discovered?** Have you discovered anything new? List 3 insights you have gained.

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**Before you begin**

The dialogue sheet is a good starting point for a discussion. It is designed to be used in a way that allows everyone to contribute. It is not a test or a quiz. It is a tool to help you explore the topic of culture.

Use this space to write your thoughts and ideas.

Figure 1: Initial dialogue sheet



Figure 2: Completed sheets together

follows are not necessarily coherent arguments, rather they are the points which were noted on the sheets themselves after the discussion. In transcribing these little attempt has been made to interpret the notes.

## **Group 1**

### **Discussion points:**

- Culture is about shared purpose
- Examples of culture include: EuroPLoP, Hippie, Corporate
- Culture is an emerging value system: a heterogeneous crowd can create a culture together (e.g. religious, work environment, experience level, technology)
- The group started to create a taxonomy of culture shown in the diagram below (figure 4)
  
- Personalities vs. attitude to change “How comfortable with/without change? Ability to foresee future?”
- As consultant one can feel too outside a corporate culture (incompatible values)
- Attitude to Quality
- The group added their own quote from Philip Crosby: “Quality is like sex. It would be so good if only the other guy did their bit right.”
- Different cultures working together, e.g. EuroPLoP, multi-national (or multi-cultural) company
- Incompatible values, e.g. outsourcing
- Thinking culture is broken shows a lack of understanding - “What is a broken culture?” is itself a challenge
- Different national cultures (e.g. US, UK, Scandinavia, Japan and Germany) exhibit different approaches and strengths of management control.
- Internal branding



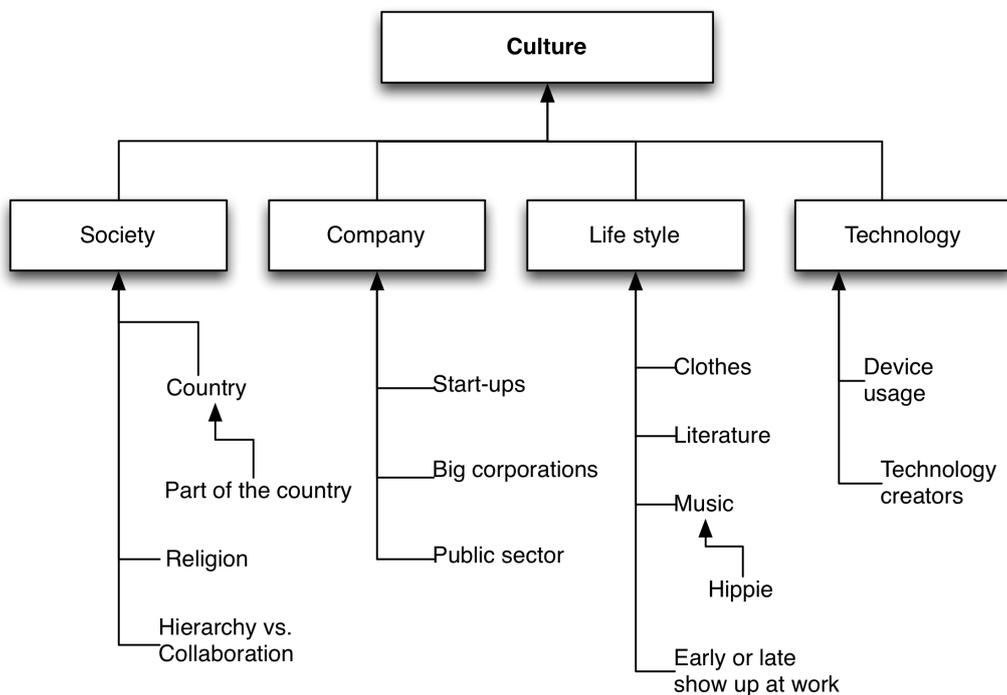


Figure 4: Group 1 culture taxonomy

- “Attract people by changing process”
- The Kurt Vonnegut quote (printed on the sheet) seemed to describe the tone of much discussion well: “A first grader should understand that his or her culture isn’t a rational invention; that there are thousands of other cultures and they all work pretty well; that all cultures function on faith rather than truth; that there are lots of alternatives to our own society.”
- Another quote on the sheet, from Alan Ginsberg also helped summarise the group discussions “Whoever controls the media — the images — controls the culture”.

### 3 insights:

- Culture is all about values
- Demonstrated in images
- You can change the culture but you can’t control the destination

## Group 2



Figure 5: Picture of completed Dialogue Sheet (Group 2)

- People sharing common values
- Culture can relate to
  - A domain
  - Environment
  - Economics
  - Tradition & history
  - Type of software
  - “Stiff” Project management
  - Different companies - things taken for grants
- USA is more opinionated; Australians more fact based (Editors note: there was one Australian on this team.)

- Australian - Singapore
  - When to schedule meetings
  - Do people stay late to help colleagues?
  - Australia: everyone goes home at 5pm formality
  - UK expectations to go out with people afterwork; 2pm drinking sessions effect family life
- Industry & Academic cultures can be quite different
  - Industry: Focus on project and profit
  - Academic: No product focus, no economic pressure
- Stakeholder groups
  - Workgroup at EuroPLoP
  - European science project
  - International computing
  - Vocation
  - Department
- Intercultural behaviour e.g. Japan, USA, India, Australia, France
- Difference depending on company values e.g. Enquirers think Waterfall
  - Differences between the cultures for the same process
  - The way of project management e.g. USA & Japan use delegation <-> (Contrast with) Do It Themselves
- Agile practices
  - Germany: stand-ups for following Agile; stand-ups as necessary
    - \* Companies
    - \* Strictness / Bureaucracy / Scale
    - \* Controls
    - \* Risk averse
    - \* Competitive fears of product

- Forces
  - Americans don't admit to failure
  - British tend not to speak up
  - Budget over certainty (ROI)
  - “Cake Act”
  - No external controls (Agile invents its own measures)
  - Barriers to communication
  - Stability of teams
  - Self-responsibility (self management)
  - Deskilling -> Reducing developer costs “white colour tradies”
  - Everyones the same (principles the same)
- Changes, e.g. Service company sold to body shop
  - view dips in interaction stops
  - team grew, spirit lost
  - margin dropped
  - team member left. Culture left with him

**Discussion points:**

**3 insights:**

- Changing people changes culture
- No culture is “better”
- Culture create their own language

**Conveners discussion**

It is worth considering the outcome in two part: the focus group itself and the findings on culture.

## Focus group and process

The Dialogue Sheet technique once again proved powerful in stimulating conversation. Reading the bullet points above it is clear that reconstructing the the dialogue in each group after the event from the notes on the sheet is not possible. However the final “3 insights” step does provide some concrete summary.

Scheduling at EuroPLoP meant that the start of the Focus Group actually occurred while some people were finishing lunch. Despite attempts to encourage people to leave the dining room and join the focus group there were fewer participants than the conveners had hoped for. Still there were enough - eight - people to have two groups of four and two lively discussions.

**One recommendation** for similar activities in would be: don't overlap the session with what is traditionally lunch time.

What is not captured in the findings above is the discussion after the sheets were complete, when the two groups came together. This itself was a very insightful conversation, although no notes were taken at the time.

In retrospect, at this point the group could have continued working, as a whole or in smaller sub-groups. This would have allowed each group to discuss something more tangible. In effect the dialogue sheet process would be the first half of a larger activity. This activity could have developed patterns. Although in this case idioms rather than patterns might be the most likely output.

**Suggestion for future focus group:** use a dialogue sheet process, with cross group comparison, as the starting point for pattern mining.

As to the sheets themselves: It became apparent to the conveners during the process that we had incorporated too much “agile” into the sheets. This was perhaps unsurprising because this was the original motivation for the sheets. However it lead to a contradiction with the sheets: they were attempting to create a very broad conversation on culture but also steered the conversation in a specific direction.

A similar question may also be raised over the Kurt Vonnegut quote: “A first grader should understand that his or her culture isn't a rational invention; that there are thousands of other cultures and they all work pretty well; that all cultures function on faith rather than truth; that there are lots of alternatives to our own society.”

Both groups came up with comments along the lines: “No culture is better.” This indeed may be true, since both groups raised the point it would seem

to have validity. However this directly reflect the Vonnegut quote. Two explanations are possible: Vonnegut is voicing a reoccurring belief or the quote itself steered participants in this direction.

One **consideration for future dialogue sheet creators** is: *to what degree do you want to steer your participants in a particular direction? And to what degree do you want to organise a completely open discussion?*

This is particularly difficult to answer because a completely open discussion could take a very long time and reach even fewer conclusions than this one did! On the other hand steering participants in a particular direction might result in a pre-written conclusion. Having said this it is worth remembering that participants may disagree with quotes or other prompts on the sheets.

The level of influence that the organizers choose to apply will depend on the reason they organize the Focus Group, i.e. if they are content with starting an open discussion to see what comes out of it, or if they have a specific goal like seeding the start of a new pattern language. We would advise future organizers to be aware of this possibility and consider their response in advance.

## Culture

More than anything else the conveners were left with a feeling of just how mind boggling vast the topic of “culture” is. The taxonomies both groups tried to create demonstrate how many different types of culture there potentially are.

It may have been better to narrow the focus of the investigation and either look at culture in general (devoid of software or agile) or to consider software development, and possible agile specifically. However attempting the more specific topics without holding a more general discussion on culture might have resulted in a general discussion on culture anyway.

For example, the sheets could have been specifically designed to analyse the implementation difference of Agile in various cultures. This would have required more pre-work, especially research, by the organizers before hand.

## Conclusions

- Perhaps because of the starting point the sheets steered people to talk more about agile when it would have been better to leave this to one side.

On culture in general:

- Culture is vast. A focus group like this could only ever scratch the surface of the issue.
- Culture is shared values of a group, an individual can belong to many different groups, some of which lap while others some may be isolated.
- A shared culture can make working and learning together easier - possibly by reducing transaction costs, possibly by increasing trust. Definitely a shared culture improves communication and reduced misunderstandings. As with patterns, a shared culture creates a shared vocabulary and language.
- No culture can be considered better than another in absolute terms. Cultures may be compared, even ranked, on specific criteria but it is not possible to rank cultures as a whole. (Indeed, one might ask who is authorised to rank cultures anyway?)
- From the outside, or to someone new to a culture, a culture may look “broken” but it is only broken by reference to the outsiders comparison to other cultures and the values they hold.
- Cultural values are represented in the media used by the group: images are particularly powerful but other media forms can be used, e.g. the group will create their own language

EuroPLoP - and the other PLoP conferences - are interesting example here. The community actively sets out to create language with patterns. In the process the community has created its own language around patterns (e.g. meta-patterns and pattern sequences) and the conferences (e.g. workshops, focus groups and “games” implicitly meaning non-competitive group games.) These languages transmit the culture from old to new participants.

- The messages carried by the media are a manifestation of the values but the relationship is circular. The messages reinforce the culture and help select and initiate new recruits, but they can also be used to change the culture and values of the existing group.

This finding is reminiscent of the conveners earlier focus group on Conway’s Law [Hvatum2005]. The homomorphic force - a force perpetuating the current structure - also demonstrates the circular effect.

- Using media messages culture can be changed but it is not possible to determine the end point of that change.

The original aim, to understand how culture affects software development:

- It is clear that culture has a massive effect on the way different teams approach software development
- We would suggest that much - may be most - of the existing literature neglects culture and assumes a “one size fits all” approach.
- Given the dominance of American leadership in this field and the use of the English languages as the lingua-franca of the industry it may be that software development as often reported has an implicit Anglo-Saxon cultural context.
- Companies which invest in creating a shared culture may find it easier to pursue dispersed work across different countries.

## Thoughts on Culture in Software Development

By Lise B. Hvatum, MSc, Schlumberger, US

In the summer of 2013 I ran a focus group with Allan Kelly at EuroPLoP named *Culture and Software Development*. As usual the event was initiated by Allan, but I was very happy to join in organizing it as my work on patterns for distributed teams repeatedly have caused me to deal with the issue of culture and its role in software development.

This writing combines my thinking before the focus group with experiences and additional thoughts triggered by the focus group event. In the focus group, we applied a technique with Dialogue Sheets that Allan has adopted (and adapted) from a research group at KTH Royal Institute of Technology in Sweden. When preparing the dialogue sheets clearly the goals and perceptions of the organizers will influence the questions and content of the dialogue sheet, and thereby the discussions at the event. But it is always amazing to see how the participants take control and lead the discussion from the base on the sheet to new areas and ideas that were outside the scope of the organizers original goals, and that enriches and expands the discussion. Although the participation in the focus group was lower than what we had hoped for, we still ended up with two interesting sheets and a number of new insights.

So what is culture in a software development setting, and how does it influence the people and the products they are making? There are many facets of culture. Below are the ones I ended up considering. I am sure there are more.

Geographic – this is the evident one and the one people normally think of first. Where people grow up and live will certainly have a strong impact on their value system and way of thinking, and in their way of interacting with others, in approaching peers and managers or sub-ordinates, in how they deal with an engineering challenge etc.

Company or organization – most companies or organizations have an internal culture (most likely with several sub-cultures) that may be difficult to penetrate for new hires, but that also creates a strong identity for employees worldwide and that improves collaboration. Work to be done though the collaboration of multiple organizations (companies or internal parts of an organization with different culture) has its own set of added challenges. Start-ups and mature companies will likely be managed quite differently and attract different types of people, as will non-profits and commercial organizations.

Profession/education – for a “pure” software team a cultural divide based on professions will likely be most evident when working with stakeholders and customers, and interfacing with other functions within the company like finance and personnel, while it will be on a more low key level within the team between various roles like manager, tester, architect etc. In some countries which university you attended may affect your image (standing) in the work community.

Technology – in some cases this can be on the verge of an internal religion, and just as diverse. It should be enough to mention OpenSource vs. Microsoft, Linux vs. Windows, JIRA vs. TFS to make the camps (or divide) evident to most inside the software community.

Age – the impact of age is a non-brainer to everyone who has the pleasure of dealing with a teenager on a daily basis. The amount of information, the ease of broad communication, and the fast pace of technology and learning today has created a gap between generations in the way they view the world, in how they communicate, and in their interests and values.

Gender – the impact of gender is more subtle in some geographic areas than in others. In the extreme there are counties where no contact may be allowed between different genders, while in areas like Scandinavia gender based issues may seem non-existent until you look carefully into management styles and communication problems.

Personality – while not being a cultural divide in itself, a company culture

may very well be impacted by a few people with strong personality, or the company may attract/hire people with a certain personality that fit into the company culture. People who are not compatible will likely leave or be miserable staying.

As usual when reading up on a topic I started with Wikipedia and found the following statement :

Dealing with multiple cultures we are challenged by a multitude of behavioral patterns that may need modifications to interoperate. And by merging together people from multiple societies with value systems that may be quite incompatible in some areas, there is no wonder that many software teams have to go through painful storming and norming phases before they can jell into a well-functioning team. Or that in some cases they never reach a stage of high performance, but remain at a lesser and not too rarely painful lack of trust and collaboration.

Clearly culture will affect the interaction between the people involved in the software project. Although diversity is mostly recognized as an asset in many multi-national companies, and therefore sought by hiring with clearly defined goals in areas like gender, nationality, age distribution, and experience, diversity will also bring its own set of challenges.

On the basic level a software organization can take simple actions to reduce the practical impact of multiple cultures:

- Show respect for cultural practices by offering food compatible with each culture in the cafeteria
- Allow people to take off religious and/or national days (flexible days rather than only local days)
- Do language training to improve communication
- But to really deal with a larger population and higher levels of diversity, the organization need to invest on a sophisticated level with initiatives that require time, effort, and not least learning to implement:
- Building a common value system to incorporate the diversity but also enforce a shared base for respect and understanding
- Build the business processes on the value system to ensure the desired actions are compatible with the defined values

- Hire and promote fairly across the full range of diversity
- Move staff in the organization to facilitate learning and personal development again to strengthen the underlying value system

To me the most interesting result of cultural differences is the impact on communication – because good communication is a fundamental quality of a software team. Years ago I was part of an internal company effort doing an analysis of the success of software delivery. Our findings looking at a large number of projects (<200) were consistent with the findings of the 2009 CHAOS Report from the Standish Group [Standish2009].

| <u>IT Project Success Factors</u>             | <u>Project Challenged Factors</u>                      | <u>Project Impaired Factors</u>              |
|---|--|--|
| :: 1. User Involvement (15.9%)                | :: 1. Lack of User Input (12.8%)                       | :: 1. Incomplete Requirements (13.1%)        |
| :: 2. Executive Management Support (13.9%)    | :: 2. Incomplete Requirements & Specifications (12.3%) | :: 2. Lack of User Involvement (12.4%)       |
| :: 3. Clear Statement of Requirements (13.0%) | :: 3. Changing Requirements & Specifications (11.8%)   | :: 3. Lack of Resources (10.6%)              |
| :: 4. Proper Planning (9.6%)                  | :: 4. Lack of Executive Support (7.5%)                 | :: 4. Unrealistic Expectations (9.9%)        |
| :: 5. Realistic Expectations (8.2%)           | :: 5. Technology Incompetence (7.0%)                   | :: 5. Lack of Executive Support (9.3%)       |
| :: 6. Smaller Project Milestones (7.7%)       | :: 6. Lack of Resources (6.4%)                         | :: 6. Changing Requirements & Specifications |
| :: 7. Competent Staff (7.2%)                  | :: 7. Unrealistic Expectations (5.9%)                  | :: 7. Lack of Planning (8.1%)                |
| :: 8. Ownership (5.3%)                        | :: 8. Unclear Objectives (5.3%)                        | :: 8. Didn't Need It Any Longer (7.5%)       |
| :: 9. Clear Vision & Objectives (2.9%)        | :: 9. Unrealistic Time Frames (4.3%)                   | :: 9. Lack of IT Management (6.2%)           |
| :: 10. Hard-Working, Focused Staff (2.4%)     | :: 10. New Technology (3.7%)                           | :: 10. Technology Illiteracy (4.3%)          |

Figure 6: Standish Group Report Results 2009

Even more interesting was that when doing a root cause analysis of the categories we found that almost all our issues were based in communication problems. A major category is requirements. I believe most experienced software engineers will recognize this as a common problem area in software development. The war stories are abundant. The number of books about software requirements is another indicator that the area is a recognized challenge, and remains so despite new requirements management tools that are quite useful. *Could it be that the challenge is more due to cultural issues than technical issues?* Is the communication between the culture of business and the culture of technology what we should focus on to improve the quality of requirements?

I feel we have just scratched the surface of this enormous topic of the impact of culture on software development. And to get deeper we need to have this conversation on areas with even more diversity than we have at EuroPLoP even though there is participation from many countries and organizations there. I got more questions than answers at this stage...

## A language for culture?

**Allan Kelly, Bsc, MBA, Software Strategy Ltd.**

My overriding memory of our culture Focus Group is the realisation of just how vast “culture” is. Indeed this realisation started even before the Focus Group started work. During preparation with Lise my original question grew, there were more angles and situations to consider.

The realisation I came to is: ‘organisational culture has many many parameters.’

Even that needs explaining. An organization is most obviously a company, or a public sector body. But an organisation may be very large. For example, consider the British National Health Service:

“The NHS employs more than 1.7m people. Of those, just under half are clinically qualified, including, 39,780 general practitioners (GPs), 370,327 nurses, 18,687 ambulance staff and 105,711 hospital and community health service (HCHS) medical and dental staff.

Only the Chinese People’s Liberation Army, the Wal-Mart supermarket chain and the Indian Railways directly employ more people." [ @NHS2014 ]

In a sense this is one organization. But to what degree does a porter in Canterbury belong the the same organization as a surgeon in Aberdeen?

An organisation, may be a department, an operating unit, or even as small as a team. It would seem reasonable to say an individual working alone is not an organization but then, how many one-man companies are there that project an much bigger image?

As for parameters, both teams in the Focus Group identified a number of parameters and attempted to formulate hierarchies to understand culture: age, nationality, type of organization and type of work are perhaps the most obvious but the list goes on and on. In some organizations one parameter may be dominant, e.g. age, while another the same parameter may be trivial.

Still, out of the almost uncountable types of organization possible and the endless list of possible parameters affecting culture certain characteristics appear again and again. Maybe no two cultures are identical but some characteristics appear again and again. For example: programmers as requirements

engineers. Sometimes the same characteristic can be positive in one place and negative in another place.

One might go as far as to call these reoccurring characteristics, and similar cultures: *Patterns*. At which point the parameters which bring about these cultures are clearly *Forces*. The type of organization may be *Context*, or in some places it is another *parameter*, another Force.

Perhaps though reoccurring characteristics and cultures are not Patterns as we normally think of them. Patterns, at least in the Hillside context, have *problems* to be solved with *solutions*. A deliberately engineered culture, e.g. Hillside and PLoP conferences, might qualify as a pattern in this sense but many - perhaps most - cultures are not engineered to solve a problem, they come about as a consequence of the context and forces.

In such cases it might be more appropriate to label these cultures *Idioms* rather than *Patterns*. While idioms have much in common with Patterns they do not aim to provide solutions to problems, they describe “the normal state of things.”

Whether we consider cultures as patterns, idioms or just culture, there is one pattern element missing: Name.

Pattern writers devote much time and thought to choosing pattern names because they sum up the essence of the pattern. The name then forms part of a language, a vocabulary, which provides short-cuts in conversation and allows for high-level thinking and chunking. What we are missing then is a vocabulary for discussing culture.

Indeed the problem is wider than culture:

“Imagine biology with no vocabulary to discuss species: how to distinguish, for example, beavers from bears without any word beyond mammal? This is the state we are in when it comes to organizations; we have little vocabulary beyond the work ‘organization.’ How is a chief executive to explain to a consultant or board member that”You are treating use like an X kind of organization, but we are really a Y kind of organization" when there are no commonly understood words for X and Y?" [ @Mintzberg2013]

Mintzberg goes on to outline and name six basic forms of organization. I myself outlined several types of software producing companies [ @Kelly2012]. Unfortunately without widespread knowledge of this vocabulary these name are as useful as Esperanto.

This then is the problem we face: without a language to name organizations and cultures, and their characteristics, we are exploring, possibly re-exploring, territory without a map.

Patterns, or at least, idioms could offer a solution.

## **Contacts and comments**

If you have any questions or comments concerning this report, the focus group or any of the issues raised please contact [allan@allankelly.net](mailto:allan@allankelly.net).