Extract from IKM Working Paper no 16, 'ICT for or against development? An introduction to the ongoing case of Web 3.0', written by Mike Powell, Tim Davies and Keisha Taylor – in press

## Adopting ICT in development

The G8 summit of world leaders, meeting in Osaka in 2000, which had been widely expected to try to resolve the debt crisis paralysing many of the world's poorer countries instead decided to prioritise the potential of ICT as a key driver in development. We were now apparently living in 'an' information society (the singular was invariably used) in which information and ICT were central to economic prosperity, which offered developing countries the chance to 'leapfrog' whole stages of development, but which also offered the risk of a digital divide to which the entire international community was committed to taking steps to avoid. Task forces were set up, world summits convened. Whether the whole process has been of any value whatever in changing the relative position between the rich and the poor is a very open question.

The focus of our argument here, however, is on the use of ICT by development organisations to manage their own operations and to communicate with others, rather than about efforts to promote ICT as tools for development in their own right. This internal use is very significant. When one considers current work and communications norms within the sector, it can be hard to remember that personal computers have only been in wide use for some twenty five years, e-mail for twenty and the world wide web for fifteen. Now, it is impossible to imagine functioning within a development organisation of any size, no matter where it is located, without good web and e-mail access and, almost certainly, an obligation to use ICT based tools for numerous internal functions too. This change is significant both in terms of its impact on how we work and because it obviously represents a considerable investment.

We are not aware of any detailed empirical research on ICT spend within the sector over the last twenty years. The public accounts of most development organisations are surprisingly lacking in detail. Public criticism in the past, arguably unfair, of what were perceived as excessive administration costs encourage agencies to post as much of their expenditure as can possibly be so conceived to programme budgets rather than head office costs. In any case, money spent on ICT can cover a range of activities, such as cabling offices, buying and maintaining hardware and software, management information, training and a host of communications work, which might be accounted for under different headings. Thus even where, as in the case of the UN New York office, there is an explicit IT budget, it is unlikely that this covers all ICT spend in that office and it explicitly does not cover the IT spend of other UN stations worldwide. SOCITM, the UK association of public sector ICT managers, is quoted in a recent UK government report saying 'It is widely accepted that 3% is a benchmark of good practice in the private sector service industries for ICT spend as a percentage of total revenue' 5. It would be surprising, given the complexity of the sector, its high demand for communications across many boundaries, its many and diverse requirements for information, if the spend in the development sector was less than this norm and indeed the figure tallies with figures provided to us informally by an IT director of an international NGO. The UK's Department of International Development6, on the other hand, believes it will be able to meet a target of 2% of revenue to cover its entire administration costs, against what it claims is a sector average of 4%. However, as argued above, not all ICT expenditure is devoted to administration. It is also the case that substantial amounts of DFID money gets

passed down a chain through multilaterals and International NGOs to local organisations in developing countries and therefore gets 'administered' and 'processed' several times over.

According to OECD7 the total spend of all donors on Official Development Assistance in 2010 was USD 127.6 billion. If anything like 3% of this is spent on ICT, then clearly the annual ICT spend is of considerable significance and the question of the impact of this combined expenditure on the sector is a legitimate one to pose. We would argue that this spend has impacted on the sector as a whole in a multitude of ways, some of which may be as a result of deliberate intent and others unintentional.

Our first area of concern arises from the fact that decisions on internal ICT expenditure are almost invariably made with organisational priorities in mind and most large investments are decided on by senior management at headquarters level. For this cadre, many of whom will be working in parts of the organisation with little or no contact with programme staff, pressing issues in recent years have included increasing competition for funds, which may manifest itself in centralised and 'focused' objectives; a need to control costs and to be able to demonstrate cost effectiveness; and increasing demands for sophisticated monitoring systems through which to report on 'results' to donors. All of these encourage processes of centralisation and control to which certain types of ICT lend themselves and which have been followed with, it should be said, very mixed success in other sectors. We would accept that there are arguments that having such priorities and applying ICT to them may, done well, be beneficial. However, it can also be argued that such a strategy does little to explore and much

*5 Quoted in Government and IT- "A Recipe For Rip-Offs": Time For A New Approach - Public*
*Administration Committee, July 2011, accessed September 15th*
*6 http://www.dfid.gov.uk/Media-Room/News-Stories/2010/Spending-Review-2010/ accessed*
*September 15th 2011*
*7 OECD, Query Wizard for International Development Statistics, accessed*
*September 15th 2011*

to constrain how ICT may be applied to what should be the core business of any development organisations: that is the work done, usually in intense interaction with other stakeholders, at the level at which the development is supposed to take place. In  this, the use of this sort of ICT mirrors and reinforces the privileging of a certain type of centralised and formalised management over the ability to work with and respond to those whose lives the 'development' is intended to improve as Tina Wallace8 has so fully researched and described.

Less contestable, we suggest, is the claim that the way development organisations have applied ICT has greatly widened the gap between the information rich and the information poor. Leaving aside more general comparisons of bandwidth and the costs and reliability of ICT round the world, at his or her desk even a junior staff member of an international development organisation has instant access to an array of internal records and reports, external digital resources and social media which is immeasurably greater than what is available to counterparts working closer to the ground, especially in smaller organisations, especially in locations closer to the majority of the world's poor. This issue here is not that agencies are investing in the information needs of their own staff but that they are not making similar investments in any form in the information needs of other stakeholders in the development community. Of course, exciting projects about networking, knowledge exchange or

grass roots communication get funded for a period, but consistent, reliable support for the kind of information support agencies provide for their own staff is rare in the extreme. This is true both for bringing together specialist knowledge around specific themes in an organised and user-aware manner and, even more, for the sort of information environment which offers local communities the chance to shape their own information spaces. Very few agencies even make the effort to mark up that grey literature which they are prepared to share in a way which makes it easy to find and use for those who may not have the time, money or fixation with individual organisations to peruse each agency's website at their leisure. Another result of this 'us first' approach to managing digital content is the relative loss - not necessarily in terms of existence but certainly in terms of visibility - of actual content about development realities. This can even be a problem with internal systems:
'*a large number of participants identified the need for knowledge strategies to address internal issues before addressing these broader issues....... Interestingly, the focus on internal knowledge work belies the fact that all the study organisations relied on activities in the South as a key source of their most valued knowledge, and that eventually, all knowledge that is 'value generating' must by necessity be tied back to a level of Knowledge Sharing with those in the South'*
(Ramalingam9)


### 8 Wallace, T 'The Aid Chain: coercion and commitment in development NGOs', ITDG, 2006

Beyond this internal bias, lies the simple fact that the already unequal balance in the production of information between the 'developed' world and the developing countries has been further exacerbated in the digital age. It may be a crude measure but a look at the 'Category: Bloggers' on Wikipedia10 reveals 1083 American bloggers to three listed as African, two of whom appear to have European names.

Finally, attention should be paid to the ICT purchasing patterns of the development sector. We have no wish to develop an argument that large ICT companies are inherently evil or that their products cannot offer reliability and good value. Given the tools we are using to write this paper, it would be hypocritical to do so. However, as with the previous examples of the changing balances of information visibility and wealth, what can seem very sensible decisions when seen individually in one limited context, can appear very unfortunate when seen as part of the bigger picture. Is supporting near monopolistic US conglomerates to consolidate their global position the best economic model for development? More relevant to this paper, is the opportunity that has been missed. The size of development sector investment could have been - and still is - sufficient to sustain a substantial community of open source developers able to produce software very specifically designed with development sector realities and needs in mind. Such an approach would also allow the software produced by the expenditure of richer and more powerful organisations to be cheaply adapted and reused by less well resourced initiatives. Such processes exist within the sector - UNESCO has notably supported a number - but they remain a poor and minority strand.

Our conclusion is that one result of this investment within development organisations has been an increase in the disparities of access to and control of information and in influence and power within development discourse between the richer organisations, that have made these investments, and the less well resourced organisations and surrounding communities which they exist to support. There is therefore an argument

that very large sums of money, provided by the public and by taxpayers, to promote 'development' have in fact been spent often with the opposite results. This is why we suggest that it is appropriate to pause and think.

Such a reflective pause, if it is to contribute to positive future action, should pay attention to how such a situation has arisen, not least when so much of what has been said about ICT investment has concentrated on its liberatory and transformatory potential. Such a debate will have many elements. From our point of view, the most urgent argument that comes out of such reflection is that choices about how and with

*9 Ramalingam, Ben 'Implementing Knowledge Strategies: Lessons from international*
*development agencies', Working Paper 244, ODI, 2005*
*10 http://en.wikipedia.org/wiki/Category:Bloggers_by_nationality accessed September 16th 2011*

what technologies we work are not simply technical choices but also developmental ones, choices which demand alertness and response to issues of power. They therefore require a much deeper consideration of their strategic implications than has historically been the case.

One strand of this, a notion which the IKM programme is intending to elaborate more fully, is the lack of awareness that the development information environment can in fact be compared to an ecology. What is done in one part of the 'eco-system' affects the whole. Thus we in no way argue against development organisations investing in their own information systems but suggest that they should think through the impact of their decisions on the wider ecology as they do so.

One aspect of this involves the sharing of knowledge. At its simplest level, this involves the appropriate marking up and sharing of internally generated information so that agency learning can contribute to the development knowledge commons. Far more substantial, however, is the responsibility that we suggest all development organisations share to make sure all stakeholders have sufficient information to participate effectively in development processes which affect them. In our view, it is neither possible, nor desirable, for individual organisations to provide all the information needs of all the stakeholders they work with. There is therefore a requirement for mechanisms of collaboration to help build resources which will become of ever greater value to communities over time. Indeed without doing this, without communities being aware of the choices available and the rationale for any activity, it can be argued that development does not take place.

We also think, and hope that the rest of this paper shows, that development cannot work if it is based purely on an understanding of the present and the past. It has to be able to look ahead and identify risks and opportunities that lie ahead and take steps to shape a more development-friendly future. While such an approach does not demand consensus - individual agencies are entitled to forge their own paths - a collaborative approach offers many possibilities for mutual learning, shared risk and benefits of scale. We therefore suggest that development agencies should seek out ways of working together to identify the key developmental challenges which foreseeable technologies might help address and to launch collaborative programmes to enable the necessary technological developments. We would recommend this approach in relation to all technologies but argue it is particularly necessary and potentially beneficial to the development friendly development of Web 3. A map11 of semantic web researchers published in 2006, shows a single respondent in South and central America, none in Africa and none even in India. How

then can they be expected to identify and respond to developmental issues? Without informed critical input, without collaborative experiment and reflection and in a world of unequal power, the likelihood of Web 3.0 use falling into the same traps as previous waves of ICT innovation and compounding new 'data divides' on top of the information and digital divides that already work against development is very high.

*11 MIKA, P., ELFRING, T & GROENEWEGEN, P. 'Application of semantic technology for social network analysis in the sciences* Scientometrics, Vol. 68, No. 1 (2006) 3-27*