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# **IS and the Integrated Network Organisation: a cautionary tale from the Financial Services sector**

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## **Abstract**

*Modern information and communication technologies (ICTs) have been heralded as a key enabler of more integrated, flexible, network forms of organising. In this paper we critically examine such claims by drawing on evidence from a longitudinal, interpretive study of the strategic use of IT within the Irish credit union movement. While various economic and technological factors had contributed to the emergence of an impetus for organisational reform and modernisation in some quarters, the realisation of such changes was complicated by historically-constituted contradictions and ideological differences. IT, however, appeared to offer a relatively painless solution to such problems by promising the prospect of significant organisational change without substantial reform. Here, we argue that the allure of unproblematic and flexible IT-enabled organisational integration encouraged credit unions to embark on a disastrous implementation effort while conveniently ignoring fundamental contradictions within the movement. Interestingly, while the implementation attempt was unanimously regarded as a costly failure, the process associated with its development and demise brought the contentious issue of reform to a head. The result seems likely to be a significant transformation in the organisation of the movement. Paradoxically, the failure of the strategic implementation effort triggered this transformation by accident rather than by design.*

## 1. Introduction

In recent years there has been much speculation about, and interest in, the potential of new ICTs to facilitate novel and more flexible ways of organising business activities (Davidow and Malone, 1992; Byrne, 1993). It has been suggested that geographically-distributed corporations can employ such technologies to achieve much higher levels of global integration (with associated economies of scale) while retaining significant local autonomy and flexibility (Lipnack and Stamps, 1996; 1997). This is an alluring vision of organisational transformation because it suggests that organisations can reap the benefits of integration without surrendering flexibility. Unfortunately, however, much of this discussion has tended to take the form of theoretical speculation, with very few reports of in-depth empirical studies that can be drawn upon to substantiate such claims. Moreover, the theoretical discussion couches these problems predominantly in technical terms, with little emphasis on attendant social, political and historical issues (Knights and Willmott, 1999). An examination of empirical evidence would appear to be highly pertinent, then, given the many examples in the IS literature of failed implementation attempts or contradictory outcomes (Robey and Boudreau, 1999).

In this paper we present a detailed account of an unsuccessful attempt by the Irish League of Credit Unions (ILCU) to deploy IT as a means of facilitating a move to a more networked form of organising. The ILCUTECH Standard Information System (ISIS) project was intended to provide a centralised, standard banking system that would enable all credit unions to offer an expanded range of financial services to their members. ISIS never progressed beyond pilot testing and was abandoned in 2001 following severe budget and schedule overruns. As a result of the project's collapse, a split has developed in the ILCU; several of the larger credit unions have left the organisation and are considering setting up an alternative umbrella group. We argue that one of the key problems was that, in their enthusiasm to embrace such an alluring technological solution to specific organisational problems, the credit union movement neglected more deep-seated issues that were previously largely ignored or unarticulated. These issues went right to the core of the values of the movement. Thus, what was initially seen as largely a technical problem turned out to be much more fundamental and deeply rooted.

The paper begins with a brief description of the research design. The first section of the case description offers a historical overview of the Irish credit union movement that illustrates the ethos of mutual self-help and voluntary work, while the second part describes the failed ISIS project and outlines the developments that have occurred since the project's demise. In the analysis, we use the concept of organisational archetypes (Greenwood and Hinings, 1993; Cooper et al, 1996) to illustrate how the failed implementation crystallised pre-existing divisions within the credit union movement that had previously lain dormant. This unintended consequence suggests that the failed project facilitated organisational transformation within the movement, but that, paradoxically, the changes were achieved by accident rather than design. We conclude by emphasising that the creation of new organisational forms should not be seen as primarily a technical matter, but one that involves key social, organisational and political issues.

## 2. Research Design

The research is part of an ongoing, interpretive, longitudinal study (1999 – present) into the use of technology within the ILCU, with particular attention given to the failed ISIS Project (1998-2001). Primary data were collected from unstructured interviews with a range of people involved in the credit union movement (see Dangerfield, 1999; Mangan, 2000). The sampling strategy involved interviewing as wide a range of stakeholders as possible, including ordinary members, officers and managers of individual credit unions, the President and Vice-President of the ILCU, members of the project team (including the project manager), the Credit Union Advisory Committee (which reports to the Irish Government), as well as two of the external IT suppliers. In total, senior people from eighteen credit unions were interviewed during the course of the research, with six people interviewed more than once. The respondents were evenly split between the opponents and proponents of the project.

Sources of secondary data included media reports, public and confidential internal documents (including minutes of meetings, annual reports, accounts, specially commission consultants reports), Government white papers and legislation. While credit union personnel provided some of this documentation, the majority of the secondary data was collected independently.

## 3. Case description

### 3.1 The Irish Credit Union Movement

The Irish credit union movement originated in Dublin during the 1950s. At a time of high interest rates in Ireland, the founders were interested in offering an alternative to hire-purchase credit and illegal moneylenders (Quinn, 1999; Culloty, 1990). The first two credit unions opened in 1958 and enthusiasm for the movement grew rapidly. Based on the Credit Union Acts, 1966 and 1997, each credit union is independently run on a non-profit basis and can offer savings and loan facilities to its members. Since its inception, the movement has played an important role in Irish society, achieving widespread recognition and popularity. The most recent figures show that by December 1999, there were 438 registered credit unions in the Republic of Ireland, with just over 2 million members and assets of approximately EUR5 billion (Sisk, 2001).

Despite the legal autonomy of each credit union, the founders also created a centralised administrative organisation that operates alongside the individual credit unions, offering training and support services for its affiliated members. This organisation, now known as the ILCU, was created in 1960 and the first set of standard rules for credit unions were adopted at its inaugural Annual General Meeting (AGM) in 1961. Like the individual credit unions, this body was organised on a voluntary basis from the outset; the first secretary of the league performed and paid for all the administrative work and also allowed her home to serve as the league's office until 1969, when the credit union headquarters moved to its own premises.

From these modest beginnings, the ILCU has grown alongside the credit unions. The ILCU is a non-statutory body with full time administrative and technical staff. The Board of Directors, however, is comprised solely of voluntary officers. Membership of the ILCU is voluntary and credit unions become affiliated members when they accept and adopt the Standard Rules for Credit Unions (ILCU, 1998). Central to the ILCU's

understanding of co-operative principles are the core values of equality, equity and mutual self-help. In practice, these are reflected in the promotion of the league's governance structure, service to members and the concept of social responsibility.

Traditionally the movement was organised by small groups of volunteers who ran the credit union offices in a variety of borrowed locations such as parish halls and school buildings. None of the officers received payment for this work and many of the credit unions only opened for a couple of hours per week. More recently, with the growth in popularity of the movement, many of the credit unions have begun to organise themselves on a more professional basis. There has been a move to build bespoke credit union premises, full-time counter staff and managers have been hired, business hours are kept, and, although the Boards of Directors still comprise of voluntary officers, more emphasis is being placed on the professional management of each credit union.

### **3.2. The ISIS Project**

In the late 1990s, the ILCU turned to IT in an attempt to dramatically transform the organisational structure of the league. They wished to maintain the credit unions' autonomous, decentralised status while simultaneously reaping the benefits of increased integration. Due to the fractured nature of the credit union movement, the IS selection process was highly decentralised, with each credit union responsible for sourcing their own hardware and software. By the late 1990s, there were approximately 450 computer installations, comprised of at least 33 different software systems serviced by 26 suppliers, as well as several smaller credit unions that updated their accounts manually (ILCUTECH, 2000). It was felt that because there was no common interface between the systems, this produced operational inefficiencies making economies of scale impossible. Furthermore, the credit unions had become overly dependent on individual suppliers; in 1997 and 1998 two significant suppliers withdrew their services from credit unions.

Additional impetus to adopt a networked IS solution was created by several external factors. In particular, the competitive landscape had changed significantly since the founding of the movement, with some of the most significant change having only come about relatively recently. The revised Credit Union Act, 1997 and the impending Single Regulatory Authority meant that credit unions would be required to produce strictly audited accounts. Falling interest rates meant that margins were falling. In addition, the lower interest rates have made retail banks more competitive and have forced them to target market segments such as holiday and car loans; these areas were traditionally the preserve of the credit unions. Similarly, new players in the financial services marketplace, such as the supermarkets, are targeting the credit union membership base and threatening to saturate the market. Finally, new financial services are emerging. Many of these are facilitated by developments in IT and include ATMs, direct debits, credit and laser cards, telephone and Internet banking.

The ISIS project was initiated in order to create a centralised banking system for all credit unions affiliated to the ILCU. The system was conceived as a tool to enable all credit unions to offer a full range of financial products and services to their members, thus bringing the movement in line with marketplace trends and complying with the increased regulatory requirements. With ISIS, credit unions could offer services such as electronic fund transfers, ATM and debit cards. Furthermore, ISIS would remove dependence on suppliers because it was owned and managed by the credit union movement. A key

feature of the system was that it would be flexible enough to cater to the needs of all credit unions, irrespective of their size and the systems already in use, thus allowing each credit union to preserve its decentralised, legally independent status while concurrently organising in a more networked fashion. The allure of ISIS as a technological solution is illustrated by the ILCU President's speech at the 2000 AGM:

I have no doubt that the long-term viability of this movement depends, to a large degree, on the success of ISIS. . . . The real question remains, as it always has been, 'can we afford not to have it?' (ILCU, 2000).

ILCUTECH, the technology arm of the ILCU, hired a British financial services consultancy to develop the ISIS proposal in July 1998. The consultants initially estimated that the project would cost EUR50 million. By March 1999, ILCUTECH had raised almost EUR22 million, a figure that represented a 74.36% commitment to the project (ILCUTECH, 2000). For the remainder of 1999, ILCUTECH and the consultants concentrated on selecting a software supplier, sourcing a managed service provider, establishing criteria for the pilot sites and selecting which credit unions should be used to test ISIS. In October 1999, the Board of ILCUTECH were informed that the project was on schedule and within budget. When an initial project review was conducted in January 2000, however, a cost overrun was revealed. At the ILCU's AGM in April 2000, the credit unions were informed that the initial proposal underestimated the cost of ISIS and the project was now expected to cost EUR87 million instead of EUR50 million. To make matters worse, progress on the implementation phase of the project was slower than originally planned.

The project's operational and financial difficulties provoked tension in the movement as individual credit unions expressed anger, disbelief and disappointment about the findings. Opinion was divided over who was responsible for the project's difficulty. A member of the Credit Union Advisory Committee suggested that the ILCU tried to pin responsibility on the consultants and that it was 'typical of democratic, voluntary organisations that they would try to create scapegoats rather than accepting blame themselves'. Some of the credit union managers interviewed cited poor communication ('the ILCU offers a dressed-up, shop window version of what they are doing'), 'ludicrous' financial estimates and 'impossible logistics'. A senior member of the ISIS project team pointed to the ILCUTECH board's lack of expertise:

A major problem with the project is that at the start they went to consultants to do all the work, instead of hiring an IT manager with good experience in the Irish market. They should have also hired an Irish project manager who would understand the special needs of the movement. By not having staff at the beginning, huge funds were eaten up by hiring consultants.

There was no-one within the movement who championed the project and took sole responsibility for it; responsibility was diffused between the consultants, the Boards of ILCUTECH and the ILCU, as well as the project team (Mangan and Stahl, 2002). What is clear is that ISIS was poorly managed from the start: the finances were not double-checked; officers on the Board of Directors had no experience of IT project management; and, finally, widely diffused responsibility meant, in effect, that the project was managed by a committee that operated in a 'very fractured way' (Beesley, 2002).

As a result, the ILCU was forced to convene a Special General Meeting (SGM) on 8-9 July, 2000 in order to discuss the future of the project. In advance of the SGM, nineteen

of the larger credit unions in Ireland sent a letter to the Registrar of Friendly Societies and every credit union in the country outlining their concern about the developments in the project and what they understood to be the misuse of ILCU funds. Nevertheless, it was decided at the SGM to commit an extra EUR2.5 million in order to carry out a 'root and branch' review of the project. Following this review, the ILCU held another SGM in February 2001 at which it was decided to terminate the ISIS project. Since the project's collapse, several of the larger credit unions have left the ILCU and are considering setting up an alternative umbrella organisation that will cater to their specific needs.

The spectacular failure of ISIS has had several consequences for the ILCU, many of them unintended. Confidence in the movement's ability to implement a large-scale project has been eroded and, after years of favourable coverage, the media has become consistently critical of the movement. Although many within the movement still see the 'vital necessity' of providing a technological solution for the credit unions as a whole, the collapse of ISIS has had the unintended consequence that rather than uniting the credit unions and allowing them to leverage economies of scale in a network fashion, there is now a pronounced schism in the movement. Some of the larger credit unions have finally decided to leave the ILCU and are considering setting-up an alternative alliance incorporating different governance structures.

## 4. Analysis

In order to explain the reasons underlying the project's failure, and its attendant consequences, it is illuminating to examine the tensions and contradictions that had developed within the movement over a period of many years. The notion of an 'organisational archetype' is a useful conceptual device for these purposes. An archetype can be defined as 'a set of structures and systems that reflects a single interpretive scheme' (Greenwood and Hinings, 1993, p. 1052). Organisations attempt to produce 'archetypal coherence' (ibid, p. 1056) and, predicated on the existence of several archetypes that vie for limited organisational resources, the dominant archetype will safeguard its position by resisting any change to the status quo. From this it can be inferred that organisations will tend towards one predominant archetype and will exhibit inertia and conservatism when faced with change. Furthermore, the clash between archetypes can be understood using a metaphor of sedimentation (Cooper et al, 1996) to illustrate the protracted process of change whereby elements of both archetypes continue to co-exist within the new structure. This posits change as a gradual process; instead of experiencing organisational transformation as a direct, straightforward progress from one state to another, the archetypes are layered over each other, creating a hybrid that includes elements of both. This hybrid creates fault lines that cause gradual erosions as well as dramatic upheavals to the organisation's structure.

Within the credit union movement the dominant archetype could be captured by the notion of 'ethical community service'. This archetype is based on the movement's traditional values of community-focused social responsibility and voluntary work, specifically manifesting itself in the idea of the 'gentleman amateur' and a governance structure that relies on committees and voluntary officers. The constituent offices are highly autonomous, creating a decentralised, diffused power structure that makes implementation of large-scale change difficult. In contrast, ongoing institutional and market changes have contributed to the emergence of a more recent archetype,

'professional management', that focuses on growth, hierarchical responsibility and generating value for individual customers. This archetype is predominantly comprised of larger credit unions that have significant savings to invest on their members' behalf. They advocate running credit unions as a business and emphasise their knowledge and use of strategy, marketing and accountancy. Because the broader movement did not impinge directly on most of the activities of the autonomous, individual credit unions, both archetypes continued to co-exist and differences were tolerated until the emergence and subsequent failure of the ISIS project.

The primary difference between the traditional and reforming archetypes centres on the question of governance structures; the emphasis within the movement from the beginning was on community-service and this is reflected in the voting structure, which allows equal votes to both large and small credit unions. The larger credit unions have argued that the voting structure leads to political manoeuvring and partiality within the ILCU as representatives of smaller credit unions dominate the Board of Directors. One delegate at the ISIS SGM argued that the voting structure was 'just plain misguided'. In his view, the ILCU Board are concerned with re-election and, because of the significant number of votes held by smaller credit unions, the ILCU concentrates on the needs of the small offices and largely neglects those of the larger ones. As some unions grew very large, their members began to feel a sense of injustice with regard to what they perceived to be a democratic deficit within the movement; credit unions with far fewer members could exercise just as much influence. This argument reflects a wider debate regarding the equality of each community as opposed to the equality of each member and has been provoked by the principles of co-operation among co-operatives and social responsibility, both of which are central to the ethical community service archetype. Social responsibility describes a vision of social justice whereby credit unions strive for human and social development through their attention to both members and the wider community in which these members live. Co-operation stresses the need for all credit unions to act together for the greater good, rather than promoting an individual credit union's needs. These concepts are in direct conflict with the reforming archetype; some of the very large credit unions have argued that their primary responsibility is towards their members rather than the movement as a whole. A founder member of one of the largest credit unions suggested that a wide definition of community represented 'a type of Robin Hood attitude to the movement' because the large credit unions are financing the ILCU but that 'the League is looking after the small ones but not the large'. In contrast to this, the current president of the ILCU is adamant that all credit unions have to unite and act together. He argues that the larger credit unions may be able to compete effectively with other financial institutions within the area of their common bond, but that does not guarantee their ability to compete on a national or international level. In an interview published shortly after his election, he stated that:

'many people within the credit union movement have felt a sense of alienation for sometime. This was exacerbated by the ISIS debacle. There has been a lack of unity and focus in the movement' (ILCU, 2002).

As he understands it, the credit unions have lost the 'unity of purpose' that was present in the early years of the movement.

The conflict between the archetypes of ethical community service and professional management had particular resonance during the ISIS project. For example, several



managers of larger credit unions argued that per-member costing for the project meant large credit unions were contributing the majority of the finance for ISIS and that this represented bad value for money for their members. Conversely, other respondents suggested that ISIS was the only means of responding to the emerging market challenges as a collective. One manager of a medium-sized credit union pointed to the world-wide slogan 'Not for Charity, Not for Profit, But for Service' and argued that ISIS was the only means by which all credit unions could maintain their focus on traditional service without becoming 'like a bank'.

The question regarding the movement's 'unity of purpose' goes to the heart of the controversy over the ISIS debacle. The credit union movement was experiencing tensions between the need to become more integrated (thereby offering improved service to members and gaining economies of scale) while simultaneously retaining the traditional local autonomy. The ILCU was attracted by the potential of IT to facilitate greater integration without threatening the valued autonomy and flexibility of individual credit unions and decided that ISIS represented an ideal solution that could deliver significant benefits to the movement as a whole. Thus, they hoped that the conflicting archetypes and fractured nature of the movement could be ignored. The allure of unproblematic IT-enabled transformation led them to believe that they could reap the benefits of increased integration without any significant organisational change. They discovered to their cost, however, that moving to a networked form of organising was more difficult than it appeared. The implementation of such changes turned out to be a much more complex task than they initially envisaged as the ILCU's diffused governance structure meant that the project was badly managed, strong leadership was absent and the project lacked a well-defined locus of responsibility. Paradoxically, it appeared that the realisation of an integrated network form depended on the existence of much stronger, centralised governance mechanisms as well as an overall unity of purpose, both of which were problematised by the peculiar historical development of the movement.

Ironically, it is the failure of ISIS, rather than its success, that has heralded one of the most significant changes since the movement's foundation. Some of the larger, reforming credit unions had suspended their own IT plans in order to maintain the movement's unity during the ISIS project. The difficulties experienced during the project, however, not only convinced them that the traditional and reforming archetypes are incompatible, but that their members would be better served by withdrawing from the ILCU. Thus, the spectacular nature of the project's failure was the decisive event which encouraged these credit unions to disaffiliate from the ILCU and they are now discussing the creation of their own separate administrative body.

## **5. Conclusions and implications**

The ILCU's experience with the ISIS project raises a number of important issues in relation to the role of IT in the facilitation of a move to more integrated, flexible, networked forms of organising. For one thing there is a need to question the extent to which such transformations are possible in contexts where authority is widely dispersed. One of the key problems in the ISIS project was the absence of a strong centralised authority structure to push the initiative through. This is one of the paradoxes of the case because it suggests that the facilitation of such decentralised, flexible network forms can depend on the existence of strong centralised governance structures that can agree and

enforce necessary changes such as standardisation of work practices or agreements between third-party suppliers. In turn, the successful implementation of such new practices may depend on agreement regarding an organisation's core values and direction (for example, whether to remain community-focused or become customer-focused).

We have suggested, then, that the credit unions were fooled by the false promise of a quick technical fix to resolve deeply entrenched organisational problems. They failed to realise that the creation of new organisational forms is not purely a technical matter, but that there are also significant organisational issues to consider. Having failed to confront their complex and contradictory organisational structures, they were undone by that very complexity. The case illustrates the allure, yet the inherent lack of sophistication, of popular discourses about the relationship between IT and organisational transformation that frame the problem largely in technical terms, thus overlooking important historical, social and political issues.

A final paradox implicit in this case is that rather than the IT being the facilitator of organisational transformation in a direct fashion, the process was much more indirect although the change no less significant. Here it was the spectacular nature of the failure of the system that crystallised the important tensions between two world-views that had co-existed within the movement for some time. This acted as an unintentional trigger that provoked very direct action that seems likely to fundamentally transform the movement; in the wake of the failure of ISIS, several of the key credit unions have left the ILCU to set up alliances of their own. This final, unexpected outcome underlines the complexity of the relationship between IT and organisational change.

## References

- Beesley, Arthur (2002). 'Anarchy' Among Directors Feared in Credit Union Body. *The Irish Times*, Dublin, Ireland, 28 November.
- Byrne, J. A. (1993) The virtual corporation. *Business Week*, 8 February, 98-102.
- Cooper, D. J. et al (1996). Sedimentation and Transformation in Organizational Change: The Case of Canadian Law Firms. *Organization Studies*, 17(4), 623-647.
- Culloty, A. T. (1990). Nora Herlihy: Irish Credit Union Pioneer. Irish League of Credit Unions, Dublin, Ireland.
- Dangerfield, M. (1999). The Common Information System for Credit Unions: The ISIS Project from an Emergent Perspective. MBS Dissertation, Department of Management Information Systems, University College Dublin, Dublin, Ireland.
- Davidow, W. H. and M. S. Malone (1992). *The Virtual Corporation: Structuring and revitalizing the corporation for the 21st century*. Harper Business, New York.
- Greenwood, R., and C. R. Hinings (1993). Understanding Strategic Change: The Contribution of Archetypes. *Academy of Management Journal*, 36, 1052-1081.
- ILCU (1998). Standard Rules for Credit Unions (Republic of Ireland) registered under the Credit Union Act, 1997, affiliated to Irish League of Credit Unions. Irish League of Credit Unions, Dublin, Ireland.
- ILCU (1999). History & Philosophy of the Credit Union Movement. Irish League of Credit Unions, Dublin, Ireland.
- ILCU (2000). Report of the 40<sup>th</sup> Annual General Meeting, 29-30 April 2000. Irish League of Credit Unions, Dublin, Ireland.
- ILCU (2002). *Credit Union Review*, 21(132). Irish League of Credit Unions, Dublin, Ireland.
- ILCUTECH (2000). ISIS Project Comprehensive Review: Interim Report. Irish League of Credit Unions, Dublin, Ireland.
- Knights, D. and F. Murray (1994). *Managers Divided: Organisation Politics and Information Technology Management*. John Wiley & Sons, Chichester.
- Knights, D. and H. Willmott (1999). Interpreting Conceptions of the 'Networked Organization'. In: *Society on the Line: Information Politics in the Digital Age* (Dutton, W. H. Ed.) Oxford University Press, Oxford, 105-107.
- Lipnack, J. and J. Stamps (1996). *The Age of the Network: Organizing Principles for the 21st Century*. John Wiley & Sons, Chichester.
- Lipnack, J. and J. Stamps (1997). *Virtual Teams: Reaching across Space, Time and Organizations with Technology*. John Wiley & Sons, Chichester.
- Mangan, A. (2000). ISIS and Identity: An Interpretive Study of IT Implementation in the Irish League of Credit Unions. MBS Dissertation, Department of Management Information Systems, University College Dublin, Dublin, Ireland.
- Mangan, A. and B. C. Stahl (2002). Who is Responsible for ISIS? The Irish Credit Unions' Problem of Introducing a Standardised Information System. In 12<sup>th</sup> Annual BIT Conference: Management (Hackney, R. Ed.), Manchester Metropolitan University Business School, Manchester.
- Markus, M. L. and D. Robey (1988). Information Technology and Organisational Change: Causal Structure in Theory and Research. *Management Science*, 34(5), 583-598.

Quinn, A. P. (1999). *Credit Unions in Ireland*. Oak Tree Press, Dublin, Ireland.

Robey, D. and A. Azevedo (1994). Cultural Analysis of the Organizational Consequences of Information Technology. *Accounting, Management and Information Technology*, 4(1), 23-37.

Robey, D. and M.-C. Boudreau (1999). Accounting for the contradictory organizational consequences of information technology: theoretical directions and methodological implications. *Information Systems Research*, 10(2), 167-185.

Sisk, N. M. (2001). *Report of the Registrar of Friendly Societies 2000 (Incorporating Proceedings to 31 December, 2000)*. The Stationery Office, Dublin, Ireland.