

ORGANIZATIONAL RESILIENCE IN THE ERA OF ARTIFICIAL INTELLIGENCE: AN INTEGRATED FRAMEWORK FOR UNIVERSITIES AND PUBLIC INSTITUTIONS

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ABSTRACT

The article proposes an integrated framework through which public institutions and universities can build organizational resilience in the context of the accelerated adoption of artificial intelligence. Drawing on over two decades of experience in change management, conflict management, and comparative management, the author argues that technology alone does not produce resilience—it only occurs where organizational learning, quality management, and committed human leadership work together. The proposed model, $AI + Organizational Learning + Quality Management + Human Leadership = Organizational Resilience$, is tested through a comparative analysis between the public administration in Bihor County and the university environment in Cluj-Napoca, two complementary institutional contexts, and is accompanied by concrete proposals for each of them.

KEYWORDS: *resilience, digitization, budget, artificial intelligence, Cluj-Napoca, Bihor, university, administration, algorithms, efficiency.*

J.E.L. Classifications: C55, H61, H83, I23, O33, R58.

1. INTRODUCTION AND PROBLEM FORMULATION

The issue of institutional resilience is a central concern in the analysis of contemporary public management, articulated at the confluence of theoretical rigors and applied administrative dynamics. A question of why some institutions withstand shocks and others collapse at the first storm, although on paper they look equally solid? This is where resilience comes in.

Resilience is the capacity of a system, an organization or a person to adapt successfully, to overcome difficult moments and to return to its initial state after a shock or strong stress. The word comes from Latin, from *resilire* (to bounce back, to bounce back).

There are well-funded institutions that crash at the first crisis and small institutions with modest resources that find solutions in a few days. The difference, at least from what we have observed, is a certain way of learning from one's own mistakes — and the degree to which people at the top are willing to admit when the original plan no longer works.

Artificial intelligence changes the question, not just the answer. The last two or three years have brought something new to the equation. Artificial intelligence has entered universities and public institutions not as a technological fad, but as a force that rewrites job descriptions, workflows and — most often overlooked — the balance of power within the organization. Whoever controls the data and algorithms gains, willy-nilly, an influence that the official organizational chart nowhere provides.

Let's be clear from the start: we do not believe that AI, on its own, it brings resilience. On the contrary — if it is introduced over a rigid structure, with vertical communication and without real feedback mechanisms, it risks amplifying exactly the vulnerabilities it is supposed to solve. We have seen digitalization projects fail not for lack of good technology, but for lack of people prepared to use it wisely. We hope that we will never end up paraphrasing a politician who said about the case of the Romanian journalists “kidnapped” in Iraq that: “we Romanians were able to compromise the idea of international terrorism!”. And digitalization may not represent a success everywhere and always.

Here it is directly linked to one of the topics reported at the “Bogdan Vodă” University, where digitalization and the phenomena of institutional corruption are analyzed as mirrors of each other: the more a process is digitalized without a culture of quality behind it, the more doors open for abuse, not fewer (Marian, 2024, "Digitalization and Corruption"). It's an observation that I would elevate to the rank of principle: digitalization without institutional resilience can only lead to faster corruption.

2. THEORETICAL FRAMEWORK AND PILLARS OF THE MODEL

We reiterate that resilience is the capacity to adapt, to return to the initial state and to successfully overcome difficulties. Since the term comes from physics and is used in several fields,

there is no single official universal definition, but specific definitions in each field. From this daily confrontation between theory and the public procurement office, a model emerged, over time, that we also use in comparative management courses. It is not complicated, although it seems to sound too simple to be taken seriously: organizational resilience appears where artificial intelligence meets organizational learning, quality management and human leadership that does not hide behind the algorithm when hard times come.

The first pillar, organizational learning, is related to something that is taught in change management: a resilient institution is not one that never makes mistakes, but one that has a mechanism through which last year's mistake becomes this year's corrected procedure. It is not a truism. But how many institutions in the Romanian public administration actually have such a mechanism, and not just an annual report forgotten in a drawer?

The second pillar, quality management, is where half the game is actually played. We mention the research of Adrian Sorin Marian, who argued that the legal act, in the system of public order and safety, has as its foundation the very quality of the education of those who apply the law (Marian, 2024, "The Quality of Education in the System of Order and Public Safety, Foundation of the Legal Act"). This idea extends perfectly beyond the police or the judiciary: any public institution — a university included — is, ultimately, as good as the quality of the training of its people. AI can automate a bad procedure as efficiently as a good one; the difference is the quality behind the procedure, not the speed at which it runs. It is like an adaptation of the parable of the same knife that can cut bread and feed a man or it can hurt him. The moral value of the tool is not given by the tool itself, but by the man who uses it. The eight classic principles of Total Quality Management are required to be applied!

The third pillar is that of teams, and here we mention the literature on the Belbin model, as it was adapted to our institutional context. Marian asks the right question: the contemporary world is a world of teams — do we really want efficient teams, or are we content with their illusion? (Marian, 2023, "The Contemporary World Means a World of Teams. Do We Want Efficient Teams? How Do We Make Them?"). In our experience at the Department of Comparative Management, most institutions confuse the team with the meeting. They are not the same thing. A resilient team in the face of AI has clear roles, not just a physical presence in the room.

The fourth pillar, human leadership, is the one I consider, subjectively, the most fragile in our public administration. Here we strongly believe in mentoring, not in project management with

Gantt charts. It makes sense: mentoring activities in public administration, as recently documented, show exactly the role that experience transmitted directly, from person to person, has in the absorption of organizational change (Marian & Radu, 2024, “Mentoring Activities in Public Administration”).

No algorithm, no matter how sophisticated, can replace a mentor who explains to you, directly, where you went wrong last year and why. This is simply how humans were created to learn, especially through direct models. In history, there have been very rare but disturbing cases of children abandoned or accidentally brought up in families of wolves or dogs and growing up imitating them.

3. METHODOLOGY AND INSTITUTIONAL CONTEXT

We could stick to the principles and the whole article would probably be just as quotable. But we think a model that doesn't pass the test of two real institutions with real problems isn't worth much — it's just a pretty diagram on a slide. So we dare to put the model face to face with something we know from the inside, not from case studies collected from the internet: the county administration in Bihor, where we have known the situation for several years, and the university environment in Cluj-Napoca, where we have been teaching for a quarter of a century. They are not chosen by chance — I think the difference between them says more about Romanian institutional resilience than some OECD reports. Both places also have a good, positive, national reputation. Bihor and Cluj are, at first glance, two different worlds of the same historical region. Over the last decade, Oradea has relied on a more flexible local administration oriented towards rapid digitization — any city resident has seen this at the town hall counters or in online scheduling applications. Cluj-Napoca, on the other hand, is a university city par excellence, with larger, more stratified institutions and, paradoxically, sometimes not excessively fast precisely because they have several levels of decision-making. If the proposed model has any practical value, it must work — with adjustments — in a public procurement office in Oradea, and in a university senate in Cluj.

4. BIHOR: PUBLIC ADMINISTRATION UNDER THE PRESSURE OF DIGITALIZATION, SEEN FROM THE INSIDE

At APIA Bihor, where we know many of the issues, especially the application of public procurement procedures and asset management, there have been at least three waves of digitization

in recent years — from e-bidding platforms to internal contract management systems. What I noticed, and I think it is valid for all the public administration in the county, not only for the nominated institution, is that the speed of technology adoption exceeded the speed of people's adaptation every time. Not because the people are incapable—on the contrary, officials in Bihor are, for the most part, surprisingly well trained—but because training always comes after implementation, never before.

Applied to the four pillars of our model, Bihorul is remarkably good at human leadership and teams — they are small or medium-sized institutions, where the head of service really knows every file and every colleague, and informal mentoring, in a friendly discussion, works organically, almost without being called that. However, formalized quality management is much weaker: written procedures are often copied from a neighboring county and adapted hastily, without a real analysis of local specifics. Here we reiterate Marian's argument about the legal foundation of the quality of education of those who apply the rule (Marian, 2024, "The Quality of Education in the System of Order and Public Safety, Foundation of the Legal Act") — a well-trained official applying an imported procedure is much smarter than one left to fend for himself with a poorly translated user manual.

A concrete example: the introduction of e-signature and digital approval flows of purchase contracts has cut the paper processing time by almost half. But in the first months, precisely because no one had made it clear who was responsible when the system flagged an error, the blocked files piled up just like before—only now the blame was passed around, electronically, from one office to another, with no one taking responsibility. Technology wasn't the problem. It was the absence of an organizational learning mechanism that turned the first error into a corrected procedure, not into a habit of shifting responsibility.

I would also add a personal observation here, but I think it is relevant for Bihor: many of the good graduates of high schools and faculties in Oradea choose to go — to Cluj, to Bucharest or directly outside the country. It's a phenomenon that Marian analyzes, from a broader perspective, in his book about the migration of Romanians, where he shows that leaving is not only related to salary, but also to the perception of a lack of institutional perspective (Marian, 2023, "Why do Romanians emigrate?").

From our experience in the Bihor administration, this is exactly what happens at the level of public institutions: young people well trained in public procurement or in administrative IT stay for a

short time, then leave for larger institutions, usually in Cluj and Bucharest, where I think they will find a clearer career. The institutional resilience of Bihor depends, in large part, on the ability to stop exactly this drain of young talent.

5. CLUJ: THE UNIVERSITY BETWEEN ACADEMIC TRADITION AND THE PRESSURE OF INNOVATION

The university, on the other hand, has a problem of a different nature. There is no shortage of qualified human resources here — on the contrary, Cluj-Napoca constantly attracts well-trained young people, precisely those who leave Bihor or other counties.

The problem is different: university decision-making structures are designed for a much slower pace of change than the one now imposed by artificial intelligence. A new course normally goes through committees, senate, successive approvals — a healthy process for guaranteeing the quality of the teaching act, but painfully slow when, in the meantime, students are already using AI tools that the regulations do not even mention.

Applied to the four pillars, the university is very good at quality management — it is, after all, its natural field, with well-established procedures for ensuring the quality of the teaching act, exactly the area in which colleague Marian's research provides a solid foundation. But it is weaker at rapid organizational learning: a university institution generally learns correctly but slowly, and this slow speed becomes a real vulnerability when technology changes from one semester to the next. And, unlike Bihor, teaching teams are often more individualistic — each faculty member is, in a way, his or her own little decision-maker, which makes coordinating a large-scale change much more cumbersome than in an administrative office of a few dozen people.

A concrete example from our own experience at the department: in comparative management courses, last year we introduced AI tools for case analysis — students are given an institutional scenario generated or adapted with the help of AI, and then they have to identify where the model fails in the light of the theories we teach. The result was much better than I expected, but only because I built the exercise together with two other colleagues, not alone — exactly the idea of an effective team that Marian emphasizes when he asks the question of whether we really want functional teams or just the illusion of them (Marian, 2023, “The Contemporary World Means a World of Teams. Do We Want Efficient Teams? How Do We Make Them?”). A single teacher, no matter how motivated, would not have been able to anticipate as many error scenarios.

6. PRACTICAL APPLICATIONS AND SCENARIOS

What the comparison shows, beyond the obvious differences. If I put the two cases side by side, the observation that surprises me is that neither institution is resilient by design — each has a strength that the other actually envies. Bihor has close people and a functional informal mentoring, but the quality procedures lack rigor. Cluj has rigor and solid quality procedures, but the organizational learning process is too slow for the pace of AI. Neither the larger budget of a university, nor the human proximity of a small county institution alone guarantees resilience — exactly the conclusion that I had reached, by the way, since the first paragraph of this article, except that now we also have field evidence, not just intuition from the department.

A scenario, so that we don't remain in theory. Imagine a faculty that introduces an automatic evaluation system for student work, based on AI. Without organizational learning, the system will endlessly reproduce the errors in the data it was trained on. Without quality management, it will evaluate quickly, but not necessarily correctly. Without effective teams, the teaching staff will silently sabotage it, each in their own way. And without human leadership — without a dean or a department head willing to say bluntly: this automated report is wrong, we will correct it — the system will become, in two or three years, an unchallenged routine, exactly the kind of routine that destroys institutions when the next real crisis comes.

This is not a hypothetical scenario; it is, with minor variations, exactly what I saw happening with other technologies, twenty years before AI.

A second scenario, this time from the Bihor administration. So as not to stay only with the university example, I also leave a scenario from the public administration, closer to my daily office. Imagine a public procurement service in a random county — not necessarily Bihor, although it looks striking — that introduces an AI tool for pre-verifying award documentation, designed to automatically flag contradictory clauses or incorrectly formulated qualification criteria. On paper, a huge improvement: what used to take a day of rereading article by article is now done in a few minutes.

However, without organizational learning, the system flags the same ten types of errors this month that it flagged a year ago, because no one updated the internal documentation models based on the warnings received. Without quality management, officials start mechanically ticking off AI warnings without reading them, just as they often tick off standard clauses in a framework contract.

Without efficient teams, responsibility for a missed error is lost between three different offices, each convinced that someone else should have checked. And without a clear leadership at Monday's meeting on what the correct procedure is going to be from now on, the AI tool becomes, over time, just another check mark on an already long form. I've seen variations of this scenario, in smaller forms, even at the institution where I work — and, honestly, I think most colleagues in Romanian public procurement would recognize the pattern immediately.

7. LIMITATIONS OF THE MODEL AND FUTURE DIRECTIONS AND PROPOSALS

7.1. Limitations of the model: what it does not solve

It would be incorrect to present the model as a universal recipe, so we prefer to say directly where we think it does not work. It does not solve, for example, a problem of chronic underfinancing — four well-thought-out pillars do not replace a non-existent investment budget, and here I believe that any discourse on resilience that ignores the real financial constraint of the Romanian public administration is, in a way, dishonest towards those who work with minimal resources. It does not solve any problem of legislative instability — when public procurement rules change two or three times a year, any organizational learning mechanism is forced to always start from scratch, no matter how well designed.

I also believe that the model works harder in very large institutions, with thousands of employees, where the human leadership I am talking about — the one who knows the people and the files — becomes, structurally, impossible to maintain at the level of the entire organization and must be decentralized to intermediate levels, with the risk that the message will be diluted along the way. Last but not least, the model assumes a certain degree of institutional goodwill — it works hard where digitalization is used, deliberately, as a tool for stricter control, not as a tool for real efficiency. These limits do not invalidate the model; they just place it where I believe it belongs: as a diagnostic and action framework for medium-sized institutions, with a management willing to publicly acknowledge a mistake, not as a miracle solution valid wherever a new server is installed.

7.2. Concrete proposals for Bihor and Oradea

I do not believe in articles that stop at diagnosis. For the public administration in Bihor, I would propose, first of all, a form of institutionalized digital mentoring — not a one-day course, paid dearly to a training company, but an official designation, in each service, of an experienced

colleague who has, explicitly, in the job description, the task of explaining the new digital flows to colleagues less familiar with them. It costs almost nothing, compared to a new IT platform, but it solves exactly the vulnerability that I described above: the error that no one has taken note of.

Secondly, I would propose that each public institution in the county systematically keeps a register of errors (also digital) corrected in digitalized processes — not for sanctioning, but exactly the opposite, for real organizational learning.

Such a register transforms the first mistake into a better procedure for the following year, instead of burying it in a report that no one reads anymore. It seems like a small idea. From our experience in public procurement, it is precisely these small ideas, applied consistently, that make the difference between an institution that repeats the same mistake three times and one that never repeats it again.

Thirdly — and here I am addressing the local authorities in Oradea directly — I believe that stopping the departure of well-trained young people from the administration should be treated as a resilience priority, not just as a human resources issue.

A scholarship to continue one's career in the Bihor public administration, coupled with real digitalization projects that young people can lead, not just execute, would do much more than an isolated salary increase. A young person who leads, at 27 years old, the implementation of a new digital flow in an institution in Oradea has real reasons to stay; one who just fills out forms does not.

7.3. Concrete proposals for Cluj and the university environment

For the university, our central proposal is different, because the problem is different: not the lack of quality, but the speed of reaction. We would propose the establishment, at the faculty level, of short-term bridging committees — six months, not an entire academic year — made up of three or four teachers from different disciplines, with the sole role of quickly evaluating a new AI technology and proposing to the senate a provisional regulation, which can be adjusted later. Classic, permanent committees are excellent for decisions that do not change from one semester to the next; however, they are too slow for the current pace of AI.

Secondly, we would propose that each course that integrates AI tools must have at least two lecturers involved in the design of the evaluation, not just one — exactly the conclusion we reached last year, in our own comparative management course. It is not unnecessary bureaucracy; it is a direct application of the idea of an effective team, the same idea that Marian brings up when he

asks if we really want functional teams (Marian, 2023, “The Contemporary World Means a World of Teams”).

Thirdly, I believe that the university in Cluj would benefit from a formal — not just declarative — partnership with public institutions in Bihor, precisely because of the complementarity that I described above: the university brings rigor and quality procedures, the Bihor administration brings speed of adaptation and human leadership close to people. A joint training program, in which academics from Cluj teach the quality management modules, and practitioners from the Bihor administration teach the rapid adaptation and informal mentoring modules, would, I believe, be much more efficient than either of the two institutions taken separately.

7.4. How do we know if the model actually works, not just sounds good?

A more skeptical colleague asked us, at a recent conference, an awkward question: OK, four pillars, sounds coherent, but how do I, concretely, measure whether my institution has become more resilient this year compared to last year? I’ve been thinking about this question for a while, and I think the right answer is not a single indicator, but a combination of simple signals, easy to track even for an institution without its own data analytics department.

For organizational learning, the most honest indicator is the average time between the occurrence of a repeated error and the correction of the procedure that causes it — if your institution solves the same problem the third time the same way it solved it the first time, organizational learning is just a slogan on a wall.

For quality management, we would track the percentage of locally written procedures, adapted to the specifics of the institution, compared to procedures copied entirely from a general model — the higher the percentage of real adaptation, the more the quality of training of the people who apply the procedure matters more than its form.

In effective teams, the practical indicator that we use in the department is simple: how many important decisions, in a project or in a procurement file, are made and documented by a single person, without any visible contribution from anyone else? The higher the number, the more we are talking about a group of people working side by side, not about a team. For human leadership, finally, the most relevant indicator, although difficult to put into exact figures, is the frequency with which an institution leader publicly recognizes, in front of subordinates, a wrong decision and explains what changes as a result of it — not as a gesture of weakness, but precisely as proof of resilience. An institution where leaders never make mistakes, at least publicly, is an institution

that either hides mistakes or doesn't learn from them—and either is, in the long run, more dangerous than the original mistake.

None of these four signals require a special budget or an external consultant. Instead, they require something that is sometimes harder to come by: institutional honesty, a willingness to look at your own numbers without embellishing them for the annual report. I believe that this is where, not in choosing the right AI platform, it is actually decided whether an institution becomes more resilient or just more digital.

CONCLUSIONS

A European parenthesis, so as not to seem like we are reinventing the wheel. We are obviously not the first to encounter this tension between the speed of technology and the speed of the institution. Colleagues from the Faculty of Law of our university have been part, in recent years, of European projects dedicated precisely to professional training in public order and safety systems, together with partners from Germany and other states — the kind of collaboration where it is clearly seen, comparatively, how differently public institutions from different countries manage the same type of digital transition. I followed them with interest precisely because of the parallel with my own field, comparative management, where the difference between a German, a French and a Romanian administrative system is not related to technology, but precisely to the four pillars that I have described here.

What I have learned from these European experiences, even from a distance, is that digitalized professional training — online assessment modules, digital tools for testing skills — works well where it is conceived as a continuous process, not as an isolated event, once every three years, on the occasion of a funded project. It is, I think, exactly the difference between Bihor and Cluj that I described earlier, taken to a European scale: institutions that treat digitalization as a permanent learning process resist better than those that treat it as a project with a deadline and a final report. What I actually believe, beyond the model. If you were to ask me to summarize everything in a single sentence, I would say it directly: resilience is not bought from public procurement tenders for software licenses, no matter how tempting it might be to believe this sitting on the other side of the negotiating table. Resilience is built slowly, through people who own up to mistakes, through teams that actually function as teams, and through leaders who don't hide behind an automatically generated report when things go wrong.

I believe that Bogdan Vodă University has an advantage that few similar institutions have: a presence in Cluj-Napoca, as well as natural connections with the surrounding counties, including Bihor, and solid research in both change management and organizational development, as well as quality management and public law. The model I have proposed here, tested on the two contexts that have marked my career, is nothing more than a bridge between these directions — designed to withstand, I hope, even beyond the current fashion of artificial intelligence, and beyond the administrative border between one county and another.

We do not claim that Bihor and Cluj exhaust the subject — they are just the two places that we know well enough not to write about them from hearsay. But we firmly believe that any model of organizational resilience that cannot be tested on at least two real institutions, with different cultures, remains a nice theory, good for a conference, but not much use for someone who has to decide, on Monday morning, what to do with a blocked workflow. However, the two municipalities have stood out nationally and are praised for adopting ethnic progress compared to other places.

If we were to summarize the difference between the two institutions in a single thought, we would say it like this: Bihor needs to write its rules better, and Cluj needs to rewrite them faster. This is not a criticism — it is, we believe, the most honest description of the current state of Romanian public administration and academia in the face of AI.

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