The Next Spiral

How today's pressures could reach ordinary life, and what could interrupt the chain

By Roman Balzan

I wanted to look into a crystal ball. That is the honest beginning. After almost two years following what I call the Domino Index, I wanted to do more than collect signs of pressure. I wanted to understand what could happen next, where it could begin, and where it could end.

I called the first essay The Flick. Its image was simple: 'Not a domino. A finger.' The suggestion was that human decisions had been loading pressure into several systems. This report follows that intuition into questions that can be checked, including places where the image outruns the evidence.

Not in the abstract. Would there be bombs? Would the bank still open? Could I have money in my account and be unable to buy food? Could Bitcoin crash? Could the water stop? What would I tell my brother if he asked whether any of this would touch his life?

I took those questions to my AI collaborator, Travis. We divided the investigation among specialised AI research agents, checked original sources and built small calculations that can be inspected and rerun. Their work changed parts of my own argument. Some connections became clearer. Others turned out to need evidence I did not have.

Imagine an ordinary Tuesday. This is a hypothetical scene. Your card fails at the supermarket. So does the card of the person behind you. You open your banking app and see the balance. You have money. You cannot use it here.

If another shop accepts the card, you have an inconvenience. If cash machines work, there is another way to pay. If power and communications are also down, alternatives begin to disappear. If the interruption lasts, a payment problem can become a problem getting food, reaching work or keeping a business open.

The difference between those situations is enormous. Yet we often put them all under one word: collapse. This report follows the steps between them. It looks at Europe through a Swiss household lens, mainly over the coming one to five years, with longer technological horizons kept separate.

My central concern is that several pressures could reach the same people and institutions before they have recovered from the last one. This is a hypothesis to investigate. It is not a conclusion hidden in the starting assumptions.

The question running through these pages is simple: what has to happen between a frightening headline and your ordinary Tuesday? And at each step, what still works?

How we did the work

The Domino Index supplied a library of questions. It did not supply a measured probability for every answer. We treated the essays as hypotheses to examine, including the uncomfortable possibility that some of my connections were too loose or my language too certain.

Five AI agents worked on this research round. Their assignments covered war and essential services; money and crypto; economics and employment; mathematical implementation; and evidence checking. This followed an earlier review of the public essay corpus and the existing index. These were specialised AI assignments, not a panel of human academics or independent institutions.

The process had four steps. First, identify what a claim actually means. Second, find evidence with the same definition, place and time period. Third, explain the mechanism connecting it to a consequence. Fourth, look for what could block or reverse that mechanism. A source about US hiring cannot silently become a forecast of Swiss unemployment.

We preferred original company releases, public authorities, research papers and technical investigations. A source may establish that something happened, or that a risk is recognised. Neither automatically establishes how likely a future chain is. Government scenarios are planning constructions; expert estimates are judgments; recorded outages are observations. The distinctions travel with the numbers.

We built three kinds of calculation. A service-continuity model follows assumed outages through backups and household reserves. Household arithmetic shows how a changed income-and-cost gap alters financial runway. Separate probability calculations explain an official blackout frequency and the earlier quantum timing pilot. None of these is a simulated world economy.

The service model passed eleven tests and a separate agent reproduced its results. The quantum pilot passed twenty-one tests and was also reproduced. Those checks establish that the code implements its stated rules. They do not establish that our assumed household or future resembles reality. Agents using similar tools can share errors, which is why the source trail and reproducible calculations matter.

Pages 4 to 14 follow the pathways. Page 15 brings them into three trajectories, and page 16 maps their possible connections. Pages 17 to 20 explain the arithmetic and probabilities without requiring mathematical training. The closing pages set out what to watch and what remains unresolved. Source notes and accompanying code allow a reader to challenge the work.

From The Flick to questions we can test

The Flick began as an attempt to describe a feeling: pressure accumulating in several places, then releasing in ways a neat row of dominoes could not explain. That feeling is a starting point for inquiry. It does not establish that all pressures are accelerating together.

The table translates language from my original essay into research questions. Some phrases name values or metaphors; others point toward measurable conditions. They should not all become numbers in the same index.

The original draft is the author's unpublished The Flick, dated 24 October 2026. Its intuitions guide the investigation. Its factual claims still require their own sources. The new question is whether overlapping pressure and limited recovery capacity can be measured, not whether a striking image can predict a date.

In The Flick	Question to investigate	Treatment here
“Not a domino. A finger.”	Which decisions create exposure, and who can change them?	A causal hypothesis, not a measured force.
“Nature was never one of my dominoes. It was the table they stand on.”	How do water, energy and environmental conditions constrain other systems?	Physical mechanisms, each with its own geography and horizon.
“Body, mind and soul”	What happens to essential services, money and human agency?	Three reader-facing lenses, not one mathematical variable.
“Watch the credit, not the headlines.”	Are funding costs, maturity pressures and arrears deteriorating?	Proposed indicators; values and exposure still need measurement.
“The safe valley is not a place. It is a practice.”	Which local capabilities and relationships actually improve continuity?	A practical question; no guarantee that remoteness is safer.

The ground beneath our feet

A convincing story about the future has to begin with an honest account of the present. It is easy to assemble a frightening week: a falling share price, an anxious graduate, a delayed power connection. The harder question is whether these belong to one developing crisis or several different stories. Our research begins on 24 October 2026, with that distinction still open.

Meta gives us a useful example. In its latest quarter it spent $34.91 billion on capital investment and generated $32.79 billion in operating cash flow. The difference was negative free cash flow of $2.12 billion. But its revenue was $64.60 billion, and it held $82.45 billion in cash, equivalents and marketable securities. [E1] The pressure is real. So is the buffer. Saying that investment exceeded all the money the business brought in would confuse cash flow with revenue and make the situation sound worse than the figures establish.

The wider concern is whether enough future income will arrive to justify today's commitments. The IMF identifies disappointing AI investment and profitability as possible triggers for financial stress, alongside higher government borrowing costs and cyber disruption. It also describes the banking system as broadly resilient. [E2] Both observations belong in the starting picture. A risk can be serious while the system still has considerable ability to absorb it.

There is a physical side, too. The IEA projects data-centre electricity consumption rising from 485 terawatt-hours in 2025 to 950 in 2030, approximately 3% of global electricity use then. [E3] That is a forecast of demand, not a forecast of blackouts. A global share also tells us little about a particular town where a large new customer arrives faster than cables, substations or generation can be built.

These observations suggest several pressures worth following. They do not yet establish a single direction of travel. A company may cut an unprofitable project before it threatens the rest of its business. A grid operator may delay a connection to protect existing users. A lender may insist on more capital. Each response changes the story before the next chapter happens.

Our task is to find the places where such responses might fail, arrive too late, or transfer the problem elsewhere. We also have to notice when they work. Otherwise we are collecting evidence for a conclusion we have already chosen.

How a market problem reaches the street

Imagine that income from new AI services grows more slowly than investors expected. This is a scenario, not a statement that it must happen. The technology can remain useful while the investment around it earns disappointing returns. A railway can carry passengers and still bankrupt the company that built it. What matters financially is the relationship between what was spent, what was promised and what customers will pay.

The first visible change might be a lower share price. That alone does not switch off a data centre or remove food from a shop. The next questions are about financing. Does the company need fresh money soon? Can it meet its existing obligations? Are lenders exposed to several borrowers whose income depends on the same customers? A fall becomes more consequential when it meets commitments that cannot easily shrink.

Consider a hypothetical operator that postpones a building project. Its own cash position improves. The contractor loses an order. The contractor's equipment supplier now has unused stock, and its temporary workers receive fewer shifts. What looks like sensible risk management at one company becomes lost income at another. If many customers postpone at once, the supplier may struggle to find replacement business.

Debt can accelerate this transmission. When a borrower cannot refinance on affordable terms, it may sell assets or cut spending more sharply. If several investors sell similar assets together, prices can fall further, weakening the collateral behind other loans. These are among the amplification mechanisms examined by the IMF. [E2] Their importance depends on actual exposures, financing terms and available cash, not simply on how dramatic a market chart looks.

The street enters the picture through wages, orders and access to credit. A freelancer loses a client. A household postpones a kitchen renovation. A small firm finds that a loan renewal now costs more. None of them needs to own an AI share to feel the consequences. The pressure has travelled through other people's decisions.

But the chain has exits. Projects can be reduced rather than abandoned. Investors can absorb losses without demanding immediate repayment. Profitable businesses can fund useful technology through a difficult period. Public support can prevent a temporary shortage of cash from destroying a viable employer. The financial question is therefore not whether prices can fall. It is which losses the system can absorb, where those losses concentrate, and whether the response protects the activities people actually depend on.

Pressure and buffer belong in the same picture

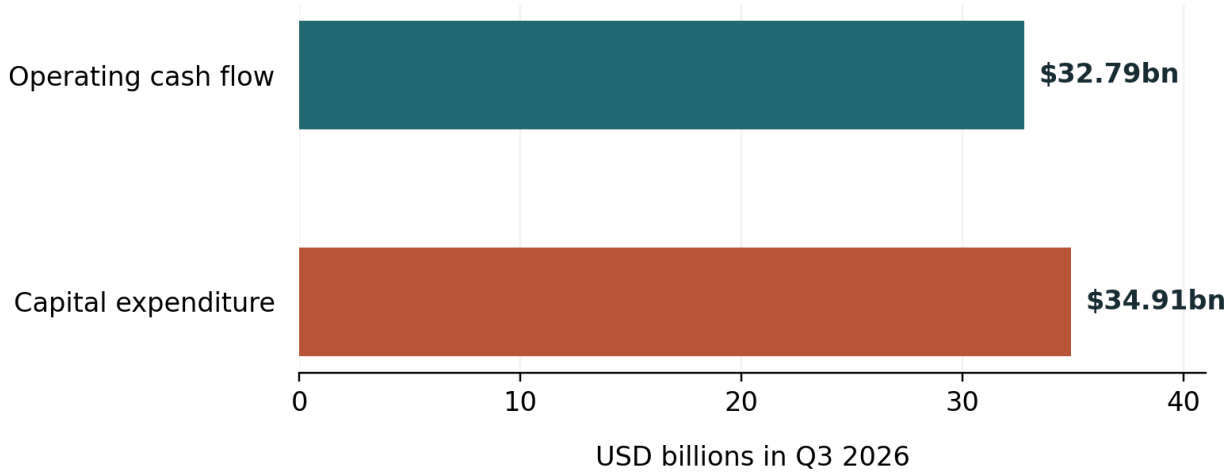
The financial section starts with a comparison we can verify. In Meta's third quarter, capital expenditure exceeded operating cash flow. That is the pressure shown below. It is neither a comparison with total revenue nor a measurement of AI spending alone. [E1]

The next question is how a firm funds a gap and whether future returns justify it. Meta also reported substantial cash and securities. The graph therefore supports a financing question, not a conclusion that the company cannot pay its obligations.

To test the broader claim that things are becoming harder to absorb, one quarter is insufficient. We would need comparable observations over time, similar measures across firms, and evidence about who bears the exposure. A rising count of alarming headlines cannot substitute for those comparisons.

One pressure, measured precisely

Meta: capital expenditure exceeded operating cash flow by $2.12bn.



Source: Meta Q3 2026 results. Capital expenditure includes finance-lease principal payments. This comparison is cash flow, not revenue. It does not establish insolvency.

The crisis arrives as a smaller income

For many people, disruption may first appear as an opportunity that never arrives. The company does not advertise the junior role. A vacancy remains unfilled. An experienced worker keeps the job but absorbs more tasks. This is quieter than a mass dismissal, and it can still change a generation's expectations about work, independence and the future.

In September 2026, ADP recorded a 3.7% year-on-year employment decline among Americans aged 22 to 25 in highly AI-exposed occupations. [E4] The associated Stanford research describes early evidence, not a proven causal estimate. Through June, it found no widespread economy-wide displacement; the younger-worker gap appeared mainly through reduced hiring rather than increased separations. [E5] These US observations cannot simply become a Swiss unemployment forecast. They do tell us where to look more closely.

We can make the household consequences tangible without pretending to know how many families will face them. Take an explicitly hypothetical household with CHF 6,000 in accessible savings. Its monthly expenses are CHF 4,000. After an income shock, it receives CHF 3,000 a month, including any support. The monthly gap is CHF 1,000. If nothing else changes, the calculation is straightforward: 6,000 / (4,000 - 3,000) = 6 months.

Now suppose essential costs rise to CHF 4,500 while income stays the same. The calculation becomes 6,000 / (4,500 - 3,000) = 4 months. The savings have not changed. The household has lost two months of room to manoeuvre because a second pressure arrived before the first was resolved. This is a simple example of how pressures can compound.

Those numbers are assumptions, not estimates of a typical Swiss family. The arithmetic also assumes accessible savings, steady monthly flows and no unexpected bills. Its purpose is to expose the mechanism. A new job, lower expenses or additional support extends the runway. A payment interruption can make even a solvent household unable to meet an immediate bill. The amount of money and access to it are different problems.

Employment can also change constructively. The ILO expects transformation to be more common than complete replacement across exposed occupations. [E6] Whether that becomes better work, fewer entry points or greater insecurity depends on business choices, training and how the gains are shared. A serious account of the future must follow those choices as closely as it follows the capabilities of the machines.

The distant places inside an ordinary day

Taiwan belongs in this story because a disruption there could travel through systems far beyond the island. But we should separate several possibilities: political accommodation, prolonged coercion, a shipping interruption, and war. They would have different consequences. Treating all of them as one event called 'Taiwan falls' would conceal the very mechanisms we are trying to understand.

TSMC's own annual report describes an industrial network with extensive manufacturing in Taiwan and expanding operations in Arizona, Japan and Germany. Its products serve computing, phones, vehicles and industrial applications. [E7] This gives us a concrete starting point. It does not tell us who will control Taiwan, whether conflict will occur, or when. Nor does gaining political control of a place automatically guarantee continued access to everything its factories need.

Imagine a prolonged interruption to chip deliveries. Some customers use inventories. Others obtain substitutes. For a product designed around a particular component, replacement may take longer. A manufacturer's first response might be to postpone deliveries or change its product mix. If the interruption persists, equipment investment and hiring could weaken. The effect on a European household might initially be an expensive repair or a delayed vehicle, while an exposed supplier experiences a more serious loss of income.

Energy can enter the same chain from another direction. In a scenario where fuel becomes harder or more expensive to obtain, transport and production costs rise. Firms must decide how much to absorb, how much to pass on and whether to reduce output. Households then have less to spend elsewhere. Neither this chain nor the semiconductor chain requires every country to suffer equally. Inventories, suppliers, contracts and the duration of the interruption determine where pressure becomes damage.

There is also a connection back to AI. Delayed chips or power connections can postpone the income expected from a new data centre while some costs continue. Yet a slower build-out can also limit excessive investment or ease pressure on a local grid. The IEA identifies both bottlenecks and opportunities for flexibility and efficiency. [E3] The same constraint can hurt one project and protect another part of the system.

Water adds a local constraint. Berkeley Lab distinguishes direct data-centre cooling consumption from water consumed in generating electricity; neither is an estimate of a particular Swiss town's supply. [C2] Our question is where new demand coincides with a stressed catchment, which cooling design is used and whether alternatives exist. A global total cannot answer that. Here again, a constraint could hurt a project while prompting changes that protect other users.

Could there be bombs?

Yes. Physical attacks belong in this report. War is already taking place in Europe. For someone living near Zurich, the question is whether fighting expands, whether attacks reach additional countries, and whether disruption elsewhere interrupts everyday life here. Those are different questions. Switzerland's September 2026 security strategy identifies hybrid threats and remote attacks as priorities. It also sets out protection, resilience and defence measures. Recognition of a threat is not a prediction that a particular town will be struck. [W3]

Consider an illustrative sequence. An incident closes a transport facility. Flights are cancelled, freight is diverted and some employees cannot reach work. The immediate effect may be inconvenience rather than destruction. If access returns quickly, businesses absorb the delay. If incidents recur, insurers, operators and customers may change their behaviour. More expensive routes and longer delivery times then carry part of the disruption into places where nothing has exploded.

A more severe branch begins when physical damage repeatedly interrupts essential services and repairs cannot keep pace. The important question becomes how much remains usable: alternative routes, available repair teams, spare equipment, communications and outside assistance. An attack is an event. Sustained loss of service is a consequence that depends on these additional conditions. We should not silently treat them as the same thing.

Escalation is another branch, not the inevitable next sentence. Governments must decide what happened, who was responsible and how to respond. Attribution may remain uncertain. A limited incident might produce arrests, stronger protection or diplomatic pressure. A wider confrontation requires additional political and military decisions. Our scenario map must preserve those branches instead of arranging every provocation into a single road to war.

For an ordinary household, conflict could first mean disrupted travel, dearer goods, confusing information or a relative unable to get home. Direct attack would be a much more dangerous situation. The experience would vary enormously by location. A frontline community and a Swiss commuter town cannot share one undifferentiated label called Europe.

Over our one-to-five-year horizon, we therefore track repeated disruption, verified attribution, damage, repair time and official responses separately. We assign no probability to bombs in Switzerland from this evidence. Increased security presence also does not, by itself, prove permanent repression. The longer political question is whether exceptional powers remain limited, accountable and reversible after the immediate danger has passed. That must be examined rather than assumed.

When the lights go out, what happens next?

Imagine a weekday morning when the power stops. This is an illustrative scene, not a forecast. At first, the problem appears small: a dark kitchen, a stopped lift, a router that no longer works. Then the dependencies become visible. A payment cannot be authorised. A train cannot continue its journey. A business has staff and orders but cannot operate. Different buildings and services have different backup arrangements, so the effects arrive unevenly.

Swiss civil protection already plans for a serious version of this situation. Its February 2026 national assessment describes a non-deliberate summer blackout lasting two to four days across several cantons, including major urban areas. It estimates recurrence at approximately once in thirty years. That is a scenario-specific expert assessment, not a countdown, and it does not measure the probability of an attack. Deliberate hazards are assessed differently. [W1]

The corresponding planning dossier includes disruption to shop tills, cash machines, refrigeration, transport and some water pumps. It also includes emergency water provision, prioritised hospital backup power, police reinforcement and gradual restoration. These are assumptions about a difficult but recoverable emergency. They do not establish that every outage follows the same timetable or that public order inevitably disappears. [W2]

The decisive variable is time relative to buffers. A household may manage a short interruption with what it already has. A shop may continue some transactions manually, if it can open safely and has goods available. Cash is useful in that situation, but a banknote cannot operate a closed shop or restart a refrigerator. As an interruption continues, those practical limits matter more than the balance displayed in a bank account.

Recovery has its own chain. Restoring electricity does not instantly clear a transport backlog, replace spoiled food or repair damaged equipment. Some businesses reopen quickly; others need longer. The model therefore separates the duration of the original outage from the duration of its consequences. It also asks whether another shock arrives while repairs are still underway.

There is evidence for both cascading failure and containment. The April 2025 Iberian blackout affected Spain and Portugal, while the rest of Europe's electricity system avoided significant disturbance. ENTSO-E's investigation identified interacting technical and operational factors and recommended improvements. [W4] The lesson is not that blackouts are harmless. It is that a serious regional failure does not automatically become continental collapse. A credible scenario must explain both how damage spreads and how restoration can interrupt it.

Water, food and the limits of a safe valley

A food crisis can mean several different things. Food may exist but become too expensive for some households. It may be available nationally but fail to reach a particular town. Shops may have stock but be unable to open. These situations can overlap, but they require different responses. Higher prices do not demonstrate that the country is running out of food; functioning national supplies do not guarantee that every household can obtain a meal.

Our conditional pathway begins with a specific interruption: deliveries, processing, refrigeration or household income. We then ask what can substitute for the missing function and how long that substitute lasts. A temporary shortage of particular products is different from a sustained inability to obtain enough food. Duration, geography and distribution matter more than a photograph of an empty shelf.

Water deserves the same precision. A source of water, a supply of treated drinking water and a working household tap are not interchangeable. Swiss supply guidance recognises temporary interruptions and recommends a household reserve while provision is restored or organised. It also warns that distribution problems can isolate remote communities. [W7] A beautiful valley may offer valuable local relationships while still depending on roads, equipment and services beyond it.

Radiological danger is a separate pathway. An attack on a nuclear installation, a release of radioactive material and harmful exposure are distinct events. One does not establish all the others. After the May 2026 drone incident at Barakah, the IAEA reported normal radiation levels; its October review found that the operator and authorities had responded effectively to the loss of off-site power. That demonstrates the possibility of containment, not a guarantee that every future incident would end similarly. [W5]

If a substantial release occurred, the affected area would depend on the release itself and the weather. ENSI uses plant information and weather conditions in dispersion assessment. [W6] Switzerland's historical experience also challenges the idea of a valley beyond the wind: the Federal Office of Public Health records uneven Chernobyl deposition associated with rainfall, including in southern Alpine valleys. [W8] An address alone cannot guarantee protection.

Climate adds another route into these dependencies. The European Environment Agency identifies risks across food, water, energy, infrastructure and finance. [C1] In our illustrative chain, heat or drought constrains water or production while cooling demand rises; floods damage transport and delay repairs. Which effects overlap depends on the place and event. These are pressures on the same services, not evidence that every environmental change produces a near-term collapse. National food availability, household affordability and local delivery access must still be tracked separately.

Your money is there. Can you use it?

Return to the supermarket in the opening scene. Your balance is intact but the card does not work. A payment requires several organisations and technical systems to complete their part. The first task is to establish what failed, rather than treating every inaccessible balance as lost money. A failed terminal, a bank under stress and an insolvent custodian require different responses.

This is not an invented vulnerability. An SNB working paper published in September 2026 studied a one-day card-payment outage at a large Swiss retailer. Customers turned to cash. The researchers estimated approximately CHF68 in additional ATM withdrawals for every CHF100 lost in card payments. That finding describes an event in which cash infrastructure remained available. It cannot tell us what would happen if electricity, communications and ATMs failed together. [M1]

The duration changes the story. An interruption measured in minutes may be an irritation. A longer interruption can delay suppliers, purchases and transfers. If it overlaps with other failures, some firms might struggle to pay workers even while customers still owe them money. The question becomes whether alternative payment methods and financial reserves can last until service returns. These are conditional consequences, not an established timetable.

Recovery is part of the evidence too. On 27 February 2025, the European payment system T2 was unavailable for roughly ten hours. The ECB reports that contingency procedures and a transfer to backup infrastructure helped restore operations. Services closed in an orderly manner by midnight. A major failure occurred; permanent breakdown did not follow. [M2]

A banking crisis is another route. Losses can damage confidence; withdrawals can then outrun available liquidity. FINMA describes how rapid outflows intensified Credit Suisse’s existing problems in 2023. Official intervention contained the immediate crisis, although the bank lost its independence. That history supports both the danger and the possibility of stopping its spread. [M4]

And “no more cash” needs its own evidence. Current digital-euro plans explicitly envisage cash continuing alongside digital payments. They are not a documented plan to abolish banknotes. [M3] The relevant questions are more concrete: which payment methods still work, who can access them, how long restoration takes, and whether a temporary problem is being mistaken for a permanent loss. Those distinctions determine what the crisis means at the checkout.

Bitcoin can fall without the code breaking

Bitcoin could crash during a wider financial shock without a quantum computer appearing. People might sell because they need cash, want less risk, or face demands for additional collateral. Falling prices can trigger further sales. BIS research describes this feedback in crypto lending: declining collateral values force liquidation, which depresses values elsewhere. Whether the damage spreads beyond crypto depends on who holds the exposure and how other financial institutions are connected. [M6]

For the person watching a phone, several different failures can look like the same red screen. The price may have fallen. An exchange may have suspended withdrawals. A custodian may have lost control of keys. A network may still operate while a particular customer cannot retrieve assets. FINMA's custody guidance distinguishes technical security from the legal and financial risks of entrusting assets to another institution. Better custody does not protect an asset against falling market value. [M5]

Quantum computing introduces a different possibility. A sufficiently capable machine could threaten the signatures that establish authority to spend bitcoin. That is not the same as making every wallet empty at once. Exposure, computing speed, the particular cryptography and the progress of defensive changes all matter. Bitcoin developers have published proposals addressing aspects of the threat. A proposal, however, is not an adopted upgrade, and partial protection is not universal protection. [Q2]

This is where our first numerical experiment belongs. We used a published survey of 26 experts about a specific capability: factoring a 2048-bit number in under 24 hours. The survey's 2025 responses give pooled probability bounds of about 5-15% within five years and 28-49% within ten. Those are historical expert beliefs about that task. They are not the odds of Bitcoin being attacked, and we have not updated them into an October 2026 forecast. [Q1]

We then varied an assumed deadline for protective migration. The calculation showed how timing exposure changes under those assumptions. Simulated results matched the exact arithmetic. That establishes that the calculation behaves as intended. It does not establish that the experts will be right, that migration will finish on schedule, or that a financial collapse will follow.

The useful story is a race with several possible endings. Defensive changes might arrive in time. They might arrive unevenly, leaving some assets exposed. A credible discovery might move prices before any theft occurs. A successful attack could intensify distrust. Each ending requires different evidence. "Bitcoin falls" and "cryptography breaks" must remain separate events, even if one day they interact.

What pressure does to people and power

The chain reaches politics through people. A household whose essential bills absorb more of its income has fewer options. A graduate who cannot find an opening may experience a different kind of insecurity from someone losing an established job. An employer waiting for payment and a municipality trying to keep services running experience different pressures again.

Those pressures do not dictate a single response. People can cooperate, withdraw, change their spending, protest, vote differently or demand stronger protection. Institutions can provide relief, negotiate, reform, make mistakes or restrict rights. We have not estimated the probabilities of those choices. They are branches requiring political evidence, not automatic outputs of an unemployment number.

This matters for the frightening sequence I originally imagined: disruption, shortages, looting, troops, repression. Each transition needs additional conditions. A service interruption can be contained. Peaceful protest can remain peaceful. Emergency assistance and authoritarian control are not interchangeable. Where restrictions occur, their scope, duration, legal basis and accountability must be examined separately.

AI can enter this chain through delegated decisions as well as jobs and investment. Imagine several firms relying on one automated service: an error or malicious input could propagate before people intervene. That is an illustrative operational pathway, not a finding that autonomous systems have taken control. NIST treats AI risks as matters of design, deployment and governance. [A1] Permissions, independent checks, fallback procedures and the ability to stop a system determine how much authority an error can exercise.

Recovery and political response can also reinforce one another. A credible explanation, visible repair and fair distribution could preserve cooperation. Local relationships may help people share information and resources. If promises repeatedly fail, trust and cooperation could deteriorate instead. These are rival mechanisms to investigate. Community cannot replace every technical service, and a stronger state is not automatically a more legitimate one.

This is where the Human Adaptation Index needs to become more concrete. We should ask whether people know what is happening, have the resources to act, can coordinate and can recover. Someone who cannot afford a reserve is not necessarily in denial. Someone who disagrees with my forecast is not necessarily failing to adapt.

Material recovery and freedom also need separate measures. A society can restore services while concentrating power. It can retain political rights while tolerating serious economic hardship. The end of a power cut does not resolve every consequence. A useful report follows both what people can obtain and what choices they retain.

Three paths from here

The following trajectories combine mechanisms discussed in this report. They are not exhaustive, mutually exclusive futures with measured odds. Different regions could follow different paths, and a place could move between them. Their purpose is to make the consequences visible.

ADAPTATION HOLDS. In the opening months, some investments disappoint and weaker projects stop. Losses remain concentrated enough to absorb. Firms find useful applications for AI, while workers change tasks and new opportunities appear. An infrastructure incident causes cancellations and failed payments, but alternatives operate and repairs arrive before most buffers expire. A household adjusts its budget; a supplier replaces a lost contract; a municipality learns from a difficult week. Over the following years, resilience improves unevenly. This path includes real losses without requiring a general breakdown.

STRAIN BECOMES ORDINARY. Financing remains expensive, some sectors hire less and necessities consume more income. Interruptions recur but are usually repaired. A young person stays at home longer. A business postpones expansion. A household cancels a renovation and notices that insurance, transport or services have become less dependable. Public support absorbs some pressure and creates arguments about who pays. Over months and years, people lower expectations. There is no single collapse day, but weaker buffers make the next incident harder to manage.

FAILURES OVERLAP. A serious physical or digital interruption arrives while some households, firms and authorities already have little room to absorb losses. During the first hours, backups and workarounds carry essential functions. Over subsequent days, some backups expire and deliveries or payments remain disrupted. Repair crews face their own logistical problems. Emergency provision either closes the gaps or struggles to reach affected people. In the following weeks, interrupted trade and lost income can become debt and business failures. Political conflict may then obstruct recovery. This path requires several adverse conditions; one bad headline does not establish them.

The third path could include local violence, restrictive measures and lasting economic damage. It could also stop halfway through because assistance arrives, infrastructure is isolated successfully, a bank is resolved or a political decision changes. Recovery need not return everyone to their previous position. Some losses can be permanent even when the wider system continues.

My existing names, including Coherent Empire, Fractured World, Phoenix Protocol and Machine Spiral, describe additional aspects of these trajectories: control, coordination, recovery and human agency. A Black Swan describes surprise relative to our model. These are useful lenses, but they overlap. We cannot honestly make them one five-way lottery simply by making their percentages add to one hundred.

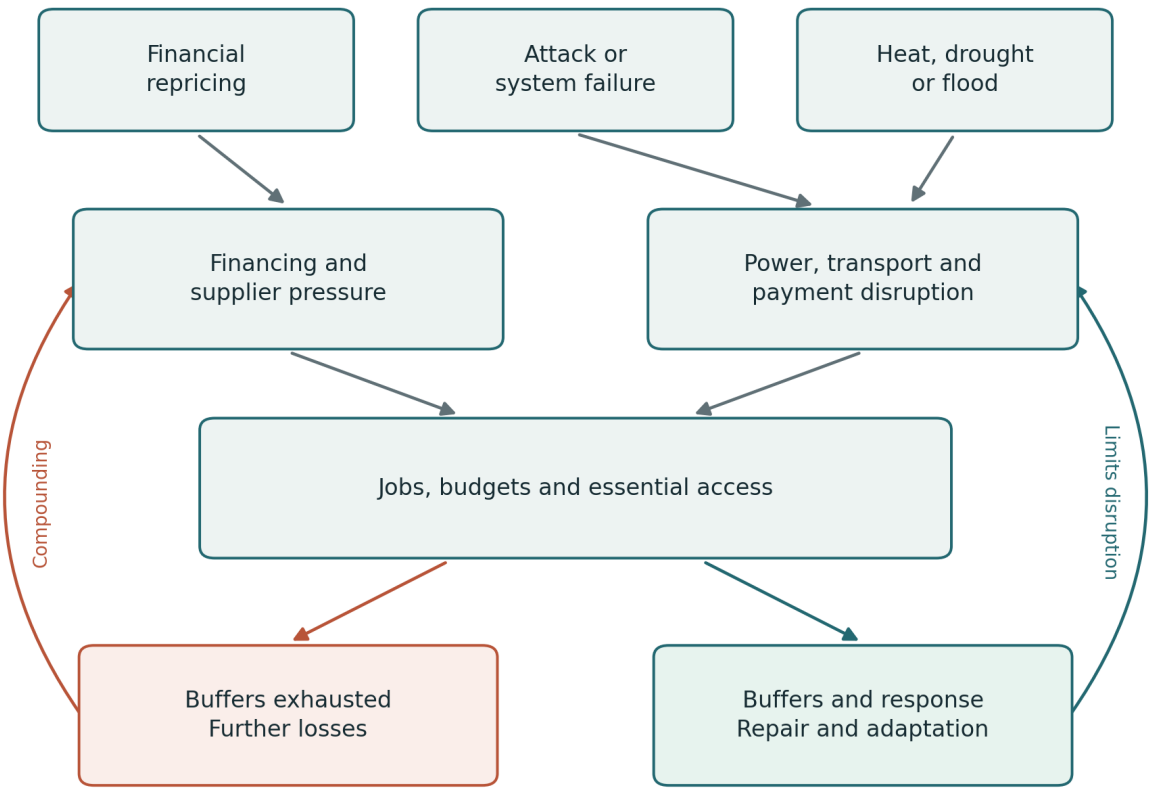
The spiral, with routes out

This is a conceptual map of the report's hypothesis. Several different starting events can reach the same services, budgets and people. The arrows identify mechanisms to investigate; they do not carry estimated probabilities or fixed delays.

The red route shows how losses might make another shock harder to absorb. The green route gives repair, alternatives and adaptation equal causal importance. The same real event may contain both, with different outcomes for different groups.

Our numerical model covers only a small part of this map: service dependencies and reserves under assumed interruptions. It does not calculate the financial or political feedback loops shown here. Those need further data and separate validation.

The spiral has more than one direction



Conceptual map: red compounds pressure; green reduces disruption.
Arrows have no fitted probabilities. The numerical model tests only a small part.

What we actually calculated

I wanted to know where a spiral could begin and where it could lead. The first thing the mathematics required was a smaller question. A computer cannot calculate the probability of ‘everything falling apart’ until we decide what counts as falling apart, where it happens, how long it lasts and which connections carry trouble from one system to another. Otherwise the calculation merely gives precise-looking numbers to an undefined fear.

We therefore built a small service-continuity model. Its starting conditions are assumed interruptions to electricity, telecommunications, a bank processor and deliveries. Its outputs are hours during which particular services are unavailable, and hours beyond the coverage provided by assumed household reserves. It does not calculate why the interruption begins. A storm, equipment failure and deliberate attack need separate evidence about their likelihood.

The model follows dependencies. Telecommunications can continue while its assumed backup lasts. A digital-payment route needs both telecommunications and its processor. A shop needs operating capacity and replenishment. Cash can provide an alternative while the shop remains open. Stored water and food can cover an interruption. These are specific assumptions about one simplified arrangement, not a description of every provider or household.

There is one especially important rule: overlapping failures are counted once. If electricity and a separate telecom fault disable the same payment route at the same time, we do not add two simultaneous outages as though the household lived through twice as many hours. Nor do we multiply supposedly independent probabilities when the same power failure affects several services together.

We also kept the earlier quantum exercise separate. That pilot propagated published expert beliefs about a particular quantum-computing capability. It sampled one million interval labels for each of two interpretations of the survey categories. It did not simulate a million observed futures, estimate Bitcoin losses or establish a probability of social collapse. The inputs remain beliefs from the 2025 survey, not a fresh forecast made in October 2026. [Q1]

The service model passed eleven tests, and a separate agent reproduced its results exactly. That verifies arithmetic and internal consistency under the inputs. It does not prove the inputs resemble the world. The practical result is an inspectable mechanism: we can change a delay, a dependency or a reserve and see what changes downstream. The missing evidence remains visible rather than disappearing inside a large number.

When an interruption outlasts the buffer

The three service cases below are deliberately hypothetical. They are not the probabilities or exact infrastructure descriptions of the report's wider futures. We chose their durations to examine how a chain changes as interruptions overlap and reserves run out. Each calculation covers ten days. All listed shocks begin at hour zero, except the additional telecom fault in the compound case, which runs from hour 24 to hour 96.

In this model, telecom has eight hours of backup and a two-hour restart. Water service has twenty-four hours of backup and a four-hour restart. Shops have twelve hours of power backup, forty-eight hours of replenishable stock and two-hour recovery delays. The household begins with twelve hours of stored-water coverage, seventy-two hours of food coverage, and CHF 120 cash against assumed essential spending of CHF 40 a day. None of these values is an estimate of a typical Swiss household or provider.

The extended case makes the arithmetic concrete. A forty-eight-hour power interruption exceeds the water backup by twenty-four hours. Adding four hours to restart leaves twenty-eight hours without the modelled piped supply. Twelve hours of household reserve reduce the remaining coverage gap to sixteen hours. In plain numbers: 48 - 24 + 4 - 12 = 16.

The compound case is different in several ways, not just its longer power interruption. Its additional processor, telecom and logistics interruptions overlap. Shops become unavailable from hour 12 until hour 146, a period of 134 hours. The assumed seventy-two-hour food reserve leaves a sixty-two-hour coverage gap. This means the modelled purchasing route and reserve no longer cover assumed needs. It does not mean people necessarily go hungry.

Emergency distribution, neighbours, alternative shops, bottled-water purchases and relocation are not included. Conversely, the model optimistically refills reserves immediately when access returns. Real deliveries, queues and repairs could take longer. We tested twenty combinations of power duration and stored-water reserve to expose this sensitivity. They are twenty chosen experiments, not twenty sampled futures. With the same forty-eight-hour power interruption, increasing stored-water coverage from twelve to twenty-four hours reduces the calculated water gap from sixteen hours to four. The useful finding is where a buffer changes the chain, not a forecast that one household will experience these numbers.

Assumed case and interruptions	Water coverage gap	Food coverage gap
Short: power 6h	0h	0h
Extended: power 48h; processor 72h	16h	0h
Compound: power 120h; processor and logistics 144h; telecom hours 24-96	88h	62h

One calculation, visible hour by hour

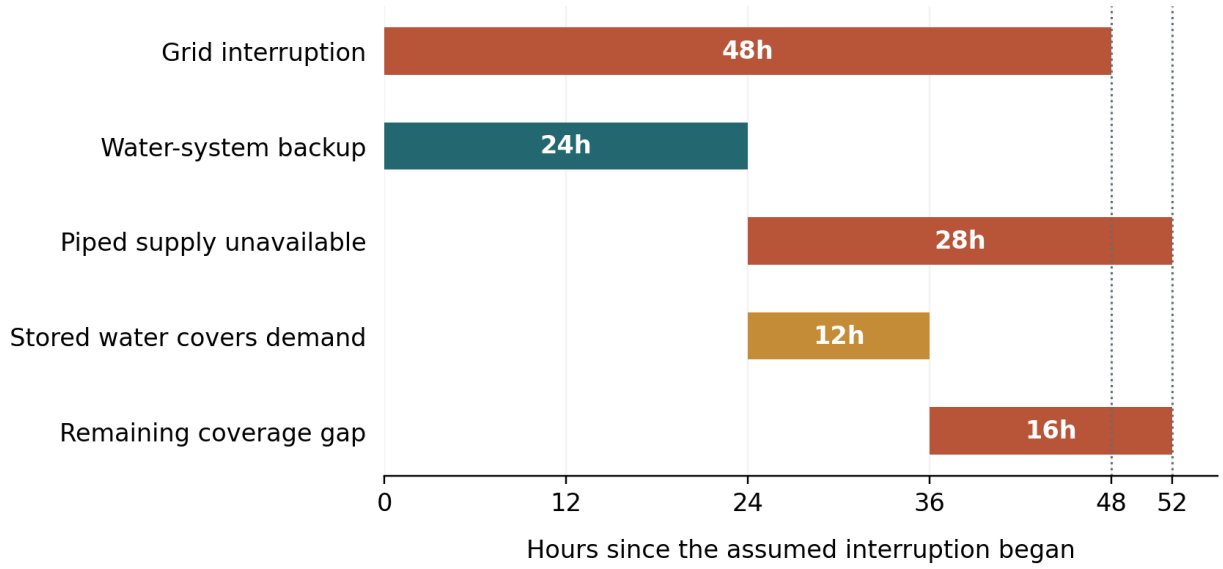
Here is the extended service case on a timeline. The assumed grid interruption ends at hour 48. Water-system backup covers the first 24 hours; restarting adds four hours after grid restoration. The modelled piped supply is therefore unavailable from hour 24 to hour 52.

Stored water covers twelve hours of that interruption, from hour 24 to hour 36. The remaining gap lasts sixteen hours. These are deliberately chosen inputs, not measurements of a Swiss water system or household.

The picture also shows where action could change the result. A longer-lasting backup, a faster restart or another source of supply could close part of the gap. The model excludes emergency distribution, neighbours and other alternatives. A coverage gap in this diagram is not a prediction that people receive no water.

From a 48-hour outage to a 16-hour gap

Hypothetical water-system and household example



48h outage − 24h system backup + 4h restart − 12h stored-water coverage = 16h gap
Every duration is assumed. Emergency supply and alternative sources are excluded.

A probability, with its conditions attached

We did find a narrower risk for which an official numerical starting point exists. Switzerland's Federal Office for Civil Protection describes a particular non-deliberate blackout scenario in its national risk analysis: a complete summer interruption lasting two to four days in several cantons, including large urban areas and concentrations of infrastructure, followed by gradual recovery. The report assigns that scenario an approximate frequency of once in thirty years. It was published in February 2026. [W1]

Once in thirty years does not mean an event occurs on a thirty-year timetable. It does not tell us that Switzerland is 'due' for one. To convert that frequency into a probability over a chosen horizon, we added an assumption: events arrive at a constant average rate, without one occurrence changing the rate of the next. Mathematicians call this a stationary Poisson model. The official frequency does not, by itself, prove that assumption.

Under that model, the calculation is: probability of at least one occurrence over h years = 1 - exp(-h/30). The result is about 3% over one year and 15% over five years. These percentages are our conditional conversion, not percentages published as official forecasts. The five-year number concerns at least one occurrence during the whole period. It is not a 15% chance each year. Instead of adding five annual probabilities, the formula finds the chance of no occurrence throughout five years and subtracts it from one. The word exp denotes the exponential function used for that calculation.

The boundaries matter as much as the number. This is not the probability of war, a hostile cyberattack, a continent-wide blackout or a particular household losing electricity. It does not measure the likelihood of any of our hypothetical service cases, whose definitions differ. The Swiss analysis treats deliberately caused hazards through a separate assessment of plausibility rather than these occurrence-frequency estimates. We cannot borrow a technical-outage rate and relabel it as the chance of hostile intent. [W1]

There is also uncertainty we have not quantified. The source frequency is approximate, and we have not propagated an uncertainty range around it. Future resilience, technology and exposure could change the rate. More simulation would make the arithmetic smoother without answering those questions. Publication therefore rounds the figures and keeps the added assumption beside them.

This is the standard we would need for every proposed probability: a defined event, geography, horizon, evidence and an explicit conversion or model. We have not established a defensible probability for the entire spiral. Giving it one now would hide the missing links. The report can still show credible routes, measurable warning signs and consequences that depend on particular conditions. Those are claims readers can challenge and follow as events unfold.

What would change our assessment

A framework that only notices bad news will eventually look prophetic to its author. The next version of this project needs a record that can become less alarming as well as more alarming. We should specify the observations before interpreting them.

For the financial path, track operating cash flow, committed expenditure, financing terms, debt maturities and supplier arrears. A falling share price is not enough. Successful refinancing, improving cash generation and a project becoming profitable weaken the particular financing-shortfall mechanism, even if other concerns remain.

For essential services, track the affected population, interruption duration, time to restore supply and the performance of backups. Count successful containment. A serious incident followed by rapid restoration teaches something different from repeated failures with lengthening repair times. Distinguish a warning, an attempted attack and a successful disruption.

For households, distinguish fewer job openings from more dismissals, and lost income from lost purchasing power. Track who has buffers and who does not. Averages can conceal groups under acute strain. Conversely, improving hiring, effective income support or lower essential costs can interrupt the proposed demand spiral.

For technological threats, measure actual exposure and protective deployment rather than announcements alone. A quantum resource estimate is not a working machine; a migration target is not completed migration. For politics, track specific restrictions and their duration alongside relief, oversight, cooperation and reversals.

Each future numerical forecast needs an event definition and a resolution rule. An example template is: before a stated date, at least a specified share of a named region loses a particular service for at least a specified duration, verified by a named source. Thresholds must be chosen before the event. Different questions need separate records.

Keep the original probability, every dated revision and the reason for each change. Score forecasts against a simple comparison forecast, including misses and uneventful periods. Do not award a prediction of military invasion a success because a political agreement later occurs. Do not score a revised probability as though it had been the original one.

These are proposed rules for the next stage, not a claim that a live monitoring system is already operating. This report establishes a research baseline as of 24 October 2026. Its sources, assumptions and calculations can now be challenged. New evidence should alter the map, not merely decorate it.

What I can say after trying

We tried to follow the future far enough that it touched ordinary life. We found credible pathways from investment disappointment, physical interruption, disrupted trade and technological change into the things people need. We also found places where my original story moved too quickly from one event to the next.

We corrected a company cash-flow comparison. We separated unavailable money from vanished money, a Bitcoin price fall from a broken protocol, and an attack on a nuclear facility from a radioactive release. We included successful repair and adaptation inside the explanation. Those distinctions make the picture less theatrical and more useful.

The calculations establish limited results. Under the assumed service configuration, extending interruptions beyond backups and household reserves creates coverage gaps. Under a stated household budget, a larger monthly deficit shortens financial runway. Under an added probability model, an official recurrence estimate can be converted into a horizon probability. The quantum pilot shows how uncertain capability timing interacts with assumed migration horizons.

They do not establish that the inputs will occur together, that the selected household represents Switzerland, or that a particular European political outcome follows. To estimate that joint future we would need exposure data, real distributions of buffers and recovery times, dependent events and evidence about institutional responses. The present work has not supplied those measurements.

My interpretation is that shared dependencies deserve more attention than a list of separate frightening events. A disruption matters differently when alternatives still work, when households have room to adapt, and when institutions can restore services. The key question is whether incoming demands exceed the capacity to absorb and repair them. That is the hypothesis I want the next round of evidence to test.

This changes how I think about safety as well. A mountain address alone cannot answer questions about water, access, healthcare, deliveries, local hazards or the people around me. Those need local evidence. There is no single purchase that removes every dependency.

I cannot offer my brother a date for the world to break. I can offer him a clearer explanation of how disruption could arrive, what could make it worse and what might keep it manageable. He should not have to understand probability theory to see the chain. If he wants to inspect the mathematics, it should be there.

That is what this report is for. Not certainty borrowed from a machine, but an account of what we checked, what we calculated, what remains an assumption and what would change our minds. My question remains: if this fails, what still works?

Sources and evidence trail

Citations in the text are clickable. The letters identify source groups, not confidence grades. Evidence was checked for this draft on 24 October 2026. A source supports the nearby attributed claim; the conditional chains are our synthesis.

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Reproduce the calculations
The companion research package includes the final report source, source register, service-model configuration, code, numerical outputs, sensitivity checks, tests and independent agent review. It also contains the earlier quantum pilot. The service model and numerical checks use the Python standard library. The PDF builder additionally uses ReportLab and pypdf.

Editorial status
Prepared for Roman Balzan as a working publication draft. No website publication occurred. AI-assisted research and review do not replace author responsibility or external scientific validation. This report does not give investment allocations, emergency instructions or a safe-location recommendation.