Adapting to Learn and Learning to Adapt: Practical Insights from International Development Projects

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Key Policy Implications

- Adaptive programming and management principles are gaining traction with donor agencies and implementing partners to confront the inherent complexity and uncertainty in international development.
- A focus on adaptation changes traditional thinking about the program cycle and merges design, implementation, and evaluation.
- Adaptive programming and management call for using information and learning to inform adjustments during implementation, which requires monitoring and evaluation systems that go beyond reporting on prespecified indicators.
- Supportive management structures and processes are crucial for fostering learning, flexibility, and adaptation. Donors and implementers are experimenting with how procurement, contracting, work planning, and reporting can foster adaptive programming and management to achieve better results.

The international development community today is abuzz with blogs, workshops, seminars, and papers on systems thinking, complexity, thinking and working politically, iterative programming and adaptive management. Managers have wrestled with the practical implications of these concepts, and donor agencies have increasingly sought to incorporate them into reforms in their policies, procedures, and programs. A 2015 study of systems thinking in the US Agency for International Development (USAID) concludes that the long-term prospects for successful change hinges “importantly upon what happens in the field, where country actors (government, private sector, civil society), implementers, other donors, and Mission staff interact.”

This brief outlines key features of adaptive programming and management and provides some examples from the field of what they look like in practice, drawing on RTI International’s experience. It also identifies some of the challenges to doing adaptive programming and management, and offers recommendations that can help overcome them.

Elements and Applications of Adaptive Management

Like many terms in international development, adaptive management has multiple definitions and different labels, with varying emphases regarding its core elements. One definition stresses it as program management that treats...
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Interventions as experimental solutions to problems that are poorly or partially understood and where activities are tests that generate evidence for the purpose of learning what works. Another definition considers adaptive management as focused on exploring alternative approaches to meeting a given set of objectives, where adaptation takes place through the application of prior knowledge and real-time action-learning. Yet another is the PDIA approach (problem-driven iterative adaptation). It starts with the local identification of a particular problem, where through repeated processes of participatory engagement, trial-and-error, and feedback, solutions emerge iteratively.

These definitions share several features:

- Linking adaptation and learning. They all explicitly connect learning and adaptive management.
- Reframing project design and implementation. They shift the linear model of the traditional project cycle's three stages of design, implementation, and evaluation to a flexible sequence of repeated experimentation and adjustments based on learning.
- Managing through flexibility-friendly structures and processes. They favor participatory collaboration with stakeholders, iterative planning and action, and incremental decision-making.
- Integrating monitoring, evaluation, and learning. They combine monitoring, evaluation, and learning to provide real-time information on progress to support evidence based decision-making.

Following an overview of how donors have adopted systems thinking and adaptive programming, in the remainder of this policy brief, we elaborate on the four features and offer examples. We also explore the implications for successful adaptive management.

**Donor Agencies, Systems Thinking, and Adaptive Programming**

The application of systems thinking and adaptive programming to international development is not new. Today's discussions frequently refer to the increasing complexity and uncertainty involved in international development as driving the need for attention to systems and adaptation. However, complexity and uncertainty have been enduring features of the international development landscape since the inception of formal foreign assistance, but the dominance of technical solutions combined with the politics surrounding donor agencies have obscured these features. In the case of USAID, the Reagan Administration introduced increasingly rigid and narrow accountability for predetermined results, and began the hollowing-out of the Agency through staff reductions and a shift toward more contractors. These pressures created a growing mismatch between USAID's operating systems and the development outcomes it sought to achieve. Former USAID Administrator Andrew Natsios characterized USAID as suffering from what he termed obsessive measurement disorder. The current incarnations of systems thinking and adaptive programming can be seen as a reaction to the mismatch, and an effort to respond to the fundamental and complex dynamics of socioeconomic development. USAID's recent incorporation of adaptive programming gained momentum with the organizational and operational process reforms labeled USAID Forward, launched in 2010. This initiative created the Bureau for Policy, Planning, and Learning (PPL), pursued implementation and procurement reforms (relabeled Local Solutions in 2013) and strengthened the Agency's human talent and skills. PPL overhauled USAID's program cycle, making major revisions in strategy formulation and project design and implementation. For example, the revised Country Development Cooperation Strategy (CDCS) starts with a situation and problem analysis, incorporates multiple stakeholder perspectives along with prior studies and stocktaking exercises, and then identifies the relevant systems related to the Mission's development objectives and program areas. PPL also developed what is called the Collaborating, Learning, and Adapting (CLA) model, which emphasizes joint monitoring and learning through periodic reflection exercises that seek to generate feedback to enable iterative adaptation of programmatic direction.

Systems thinking in the UK's Department for International Development (DFID) emerged from the Drivers of Change initiative in the early 2000s, which identified underlying political economic factors related to poverty. The guidance that DFID produced favored context-specific programming, which led country assistance planning to focus less on producing a predetermined plan and more on establishing an ongoing process of analysis and reflection as a basis for adaptation over time. In 2013 DFID conducted an internal review of its programming procedures, capacities, and operations. The assessment concluded that while previous efforts at streamlining and reform had achieved administrative efficiencies, DFID needed to move toward enabling rapid, flexible, and adaptive responses to local contexts. DFID revised its procedures to respond to these concerns with a set of "smart rules." It continues to encourage dialogue and analysis on flexibility, adaptation, systems, and sustainability and many of its solicitations reflect these principles.

Australia's Department of Foreign Affairs and Trade (DFAT) also introduced systems concepts and modified its policies.
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and procedures to enable more flexibility and adaptive programming. Among DFAT’s innovations is partnering with implementers to jointly and iteratively identify contextually grounded interventions through a politically informed search process.10

Parallel to, and often in collaboration with, donor rethinking on operational practices and programming, academics and practitioners have convened collective conversations on Thinking and Working Politically (TWP)11 and Doing Development Differently (DDD).12 Core to these conversations has been attention to adaptive programming and management, epitomized by the now familiar PDIA rubric and associated toolkit referred to earlier.

Linking Adaptation and Learning

Learning that supports adaptation represents a recognition of the complexity and uncertainty inherent in international development programs. This increases the importance of gathering and analyzing information on contextual features; such efforts lay the foundation for learning that can inform adaptation. Whereas learning in the form of research has intrinsic value as contributing to knowledge, a focus on using learning to inform adjustments during project implementation features prominently in successful adaptive management.

Adaptive programming calls for feedback loops that channel information on project activities, outputs, and results to decision-makers. A single-loop form of learning depends on tracking information on progress within pre-established boundaries—such as an annual workplan with specified targets—to see whether plans and actions are aligned. This enables managers to determine whether they are meeting their targets and undertake mid-course corrections. Double-loop learning leads to questions regarding the appropriateness of the objectives and activity targets themselves. These higher-order reflections concern strategies, underlying assumptions and values, unanticipated and emergent outcomes, and power distributions.*

One tool that donor agencies and implementing partners increasingly use to inform such reflections is political economy analysis (PEA).14 Experience has shown that, to effectively support learning and adaptation, PEA works best when it is problem-driven and participatory, engaging programmers and implementation teams, not just researchers. Donors and implementers advocate that project and field staff need to own the PEA process for it to be effective, which means that PEA should be embedded inside project teams to generate information that is actionable.15 Box 1 provides an example.

The near-ubiquitous use of online data dashboards to provide activity and indicator tracking has enhanced the efficiency of single-loop learning. However, double-loop learning calls for different tools such as outcome mapping, for example, which is a qualitative method that enables projects to capture changes in behavior, actions, and relationships to supplement routine data collection. It is particularly useful in complex situations where causes and effects are not always clear and direct.16

One implication of double-loop learning is that if project resources are fully committed, adapting and developing alternatives and trying them out can be very difficult.4 Some donors have sought to address these constraints. For example, USAID has used a practice called Windows of Opportunity, which reserves a percentage of a project’s budget to enable a shift in direction and activities in response to changing conditions and learning.

Box 1. Project-Level Applied Political Economy Analysis

In July 2017, RTI conducted a problem-driven, applied political economy analysis (PEA) on the USAID-funded Governance for Local Development (GOLD) project in Senegal around questions of fiscal decentralization. The GOLD project works to strengthen effective local governance by increasing the capacity of local governments and community participation. A collaborative team of RTI researchers, a local fiscal decentralization expert, and local project staff worked together to uncover the challenges related to fiscal transfers from the national to local government. The team conducted desk research, held an internal workshop to identify and assess issues and stakeholders, conducted interviews, and analyzed the findings.

The team identified eight core themes from the PEA research and developed actionable recommendations related to each one. A central theme was the multiplicity of government actors at the national level involved in decentralization, fiscal transfers, and support to local governments, many of whom have overlapping mandates and varying commitments to decentralization. A related theme was lack of clarity on the criteria for fiscal transfers and the impact of political influence on allocations to local governments. The GOLD project team prepared a concept paper for the USAID mission that incorporated the PEA findings and proposed actions that GOLD could take to assist in improving processes and systems.

Reframing Project Design and Implementation

A focus on adaptation changes traditional thinking about the program cycle. It both erases the boundaries between design, implementation, and evaluation and reframes the cycle to consider the complexity of development problems and non-linear change pathways. Design becomes an exercise in experimentation, where activities are formulated to generate the data necessary for adaptation. These data will inform learning on the theory of change and the impact of local context. Managing implementation means treating project design as a template to adjust based on iterative trials, rather
than as a roadmap to be faithfully followed. Evaluation transforms from a post mortem exercise conducted by outsiders looking backward into a forward-oriented platform that supports rapid cycles of learning, adapting, and assessing via participatory processes with internal and external stakeholders.

One approach, described in Box 2, is sequential learning, where implementation proceeds through quick cycles of roll-out and feedback, which enables fine-tuning of activities and adapting to specific circumstances, followed by periodic reflection points to revisit starting assumptions and to redesign and modify as needed.

Box 2. Iterative Project Design and Implementation in Haiti

RTI International’s Local Enterprise and Value Chain Enhancement (LEVE) project in Haiti, funded by USAID, seeks to improve the competitiveness of value chains in the agribusiness, apparel, and construction sectors, ultimately leading to job creation. LEVE started in 2014 with a 7-month assessment, much like an inception period, that assessed the status quo; identified champions, power brokers, and incentive structures; flagged entry points with potential to drive change; and ground-truthed expected outcomes. Based on the assessment, the LEVE team launched activities that maximized the chances of engaging stakeholders and building change coalitions. To respond to annual targets set jointly with USAID, LEVE pursued a critical mass of activities to produce results. Following the assessment period, LEVE initiated 193 “small bet” activities with 90 local and international companies and industry associations.

For example, in the construction sector, a key problem identified during the assessment was local firms’ lack of access to skilled workers, which limited their capacity to bid on tenders, which were often won by international construction firms. In 2015 LEVE brought together the Haitian Chamber of Trades and Crafts, the National Institute of Professional Training, and the American Chamber of Commerce in Haiti to organize a trade fair and an “Olympiad Skills Competition.” The contest assembled six vocational schools whose students competed in three specialties: electrical work, masonry, and plumbing. The fair and contest enabled the schools to forge connections with private firms and enabled students to gain access to employment opportunities. As a result, more firms and vocational schools began linking up to provide opportunities for employment and feedback on industry needs (curriculum, updated technology, etc.). A second vocational skills competition was held in November 2017.

For each of the three sectors, the LEVE team has held reflection sessions to monitor progress against indicators and made real-time decisions to modify, drop, or add activities. The team initially met twice monthly, but as the number of activities requiring major adjustments declined, these meetings were reduced to quarterly. The adaptive management process of designing activities that fit the context, testing and measuring the results of activities, and regularly modifying work plans and quarterly reports to provide rationale as to why activities were changed, dropped, or added has helped LEVE to build strongly integrated value chains that are becoming more competitive and more able to generate employment.

An alternative approach is parallel learning, where several different solutions are tried simultaneously. This approach exemplifies the experimental testing of interventions that is at the core of PDIA. It fits situations where projects seek to tease out a theory of change to determine which intervention, or combination of interventions, works most effectively in the context where the project is operating. Box 3 provides an example of simultaneously testing variations on an intervention from an early grade reading project. This learning approach can be carried out using quasi-experimental research designs and randomized controlled trials or via more informal means, such as participant observation by project staff and country counterparts, supported by project monitoring data. Over time, once the most effective interventions have been identified, and activities and plans redesigned to incorporate this learning, implementation may revert to the sequential approach.

Box 3. Identifying What Works for Early Grade Reading Improvement

RTI has implemented the Early Grade Reading Assessment (EGRA) in more than 70 countries and 120 languages. In the Tuskegee project in Kenya, funded by DFID and USAID, RTI supported the design and development of a cluster-randomized controlled trial of a classroom package including instructional support for teachers, student and teacher books, and materials and other inputs, using EGRA to measure learning. The multi-year trial compared varieties of a similar intervention to acquire evidence on the practices that offered the best fit for achieving gains in reading performance at a price point the government could afford.

These small bets informed the wider project design, and the most successful aspects of program design were rolled out nationally. A midterm evaluation revealed significant gains in student learning, such as basic skills in letter-sound fluency, along with oral reading fluency and reading comprehension. In response to these findings, the Kenya Ministry of Education worked with USAID, DFID, and the Global Partnership for Education to take the EGRA program to more than 7 million students in nearly 25,000 schools.

Managing Through Flexibility-Friendly Structures and Processes

Many observers have noted the practical challenges of marrying these flexible learning approaches to design and implementation with the bureaucratic management structures and processes that donor agencies have in place. These management structures and processes often constrain where adaptation and learning can take place. Flexible donor procurement, contracting, and reporting processes are critical for learning and flexible programming, as the literature has long recognized and discussed, and as donor agency staff and their implementing partners readily admit.†

† This characterization of learning approaches as sequential or parallel comes from Valters, Cummings, and Nixon (2016).17
‡ USAID interviewees for Brinkerhoff and Jacobstein’s study of systems thinking mentioned this point repeatedly.1
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From an implementer’s perspective, the starting point for adaptation and learning structures is the funder’s request for tenders. USAID, DFID, and DFAT tender requests typically specify the problem to be addressed, the objectives and targets to be achieved, the outputs to be produced, the timeframe, and the resources. Successful proposals tend to be those that promise a relatively high degree of certainty in achieving objectives, meeting targets, and producing outputs. The donor reforms summarized above have ostensibly reduced the requirements for certainty, which has opened the door for bidders to propose implementation plans that include learning and adaptation cycles. However, experience among contractors and grantees reveals that, in practice, donor tolerance for the risks associated with uncertainty is often lower than what systems thinking and adaptive management require.

Besides indicating what will be done, proposals address how the project will function to achieve the desired objectives and to enable learning and adaptation. The management structures and processes elaborated in the proposal become the organizational architecture that supports implementation. For successful learning and adaptation, that architecture must confront the inherent tension between contractual accountability for donor-specified deliverables and flexibility to respond to facilitate adaptation and learning.

However, as more tender requests begin to incorporate DDD principles and PDIA approaches, the potential space to offer proposals centered on learning and adaptation is increasing. Some USAID procurements are beginning to merge design and implementation by calling for an inception period during which the initial framing of objectives, targets, and outputs is revisited and revised. DFID and DFAT procurements have applied this methodology on a regular basis for some time.

Practical experience suggests several features of management structure and processes that can effectively support learning and adaptation. Development practitioners, including RTI International, are increasingly applying these features in their donor-funded work:18

- **Integrated implementation teams.** Effective adaptive management calls for teams that combine multiple disciplinary and sector backgrounds, local and international knowledge, political savvy, and openness to experimentation, risk-taking, and learning. Bringing in local actors as team members helps to incorporates contextual information into implementation, supports the focus on locally defined problems, and contributes to capacity development.

- **Real-time data collection and monitoring systems, analysis, and feedback.** Feedback loops are critical to the ability to adapt and learn. These loops require flexible and open-ended processes that enable a response when information and analysis suggest the need for changes. Experience has shown the benefits of involving all project staff, and in some cases beneficiaries and country partners, in monitoring, evaluation, and learning (MEL) processes and tools, such as participatory reflection sessions (Box 4) and strategic learning (Box 5, next section).

- **Flexible decision-making.** Adaptive management requires on-the-ground decision-making that can respond rapidly to changing conditions, or experimentation that demonstrates which interventions are more effective than others. Project leadership needs sufficient delegated authority to make such decisions.

- **Attention to the "soft" side of management.** Awareness of the attitudinal changes called for in adaptive management and cultivating trust can be important elements in doing iterative and adaptive work. Among the managerial tasks for project leadership is creating and/or expanding the authorizing space and professional incentives that gives actors the freedom and confidence to take risks, experiment, and learn. Process skills are key to navigating and negotiating the political and bureaucratic landscapes where development projects are situated.

Another landmark on the adaptive management landscape is the annual project workplan. Given that workplans are legally binding documents, contracting officers are key bureaucratic

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**Box 4. Farmer-Owned Data and Participatory Learning in Senegal**

The US Government’s Feed the Future project in Senegal, Naatal Mbay, implemented by RTI, seeks to improve food security, nutrition, and economic opportunity for smallholder families by developing sustainable and commercially responsive cereal value chains. The MEL system focuses on participatory data collection to encourage learning and data use by local beneficiaries. Farmers are trained on collecting data, both for project reporting and accountability and for their own learning on all aspects of the production cycle, including planting and harvesting practices, storage, and marketing and sales. Farmers hold individual group learning sessions, followed by a regionwide annual learning session.

These meetings enable farmers to share their data, discuss with their peers, evaluate their performance compared to their peers, revisit their assumptions, and make decisions about changes to their production cycle for the following season. Some farmers decided to change the seed varieties they used, and others shifted harvesting schedules, based on the learning sessions. Project staff track farmer learning to document the agricultural adaptations made and the impacts on the value chains, as well as to modify project activities to support farmers’ decisions.
Integrating Monitoring, Evaluation, and Learning

Data collection and information flows drive adaptive management and learning, so a well-designed MEL system is key. While systems thinking and the trend toward evidence-based policy making have highlighted the learning dimension of MEL, for development practitioners the primary use of MEL data is often to meet reporting requirements to donor-agency overseers (technical and financial) for purposes of accountability. In principle, MEL systems should be able to serve both aims.

However, as previously touched upon, although donors may espouse support for adaptation to enhance impact, contractual demands motivate reporting that favors progress updates against project logical frameworks, milestones, and indicators. In practice, MEL systems face a tension between fostering the double-loop learning necessary for adaptive decision-making and impact assessment, and single-loop feedback to meet contractually driven reporting requirements. Confronting this tension calls for addressing the trust issues mentioned above and for reframing the aims of accountability beyond reporting to include learning and adaptation.

Practical guidance on MEL abounds and cannot be succinctly summarized in this brief. For additional reading, see the MEL tools and advice on the USAID Development Lab’s website. In RTI International’s experience, MEL systems are more likely to promote adaptive management and learning when they are designed with the following features:

- **Focus on information use.** How data are collected, analyzed, and reported greatly affects whether they will be used. A MEL system that focuses on information in a user-friendly format is critical. It is important to supplement routine data collection with methods to capture underlying issues, rationale, or behavior or system change such as Most Significant Change Stories, Outcome Harvesting, or Social Network Analysis.

- **Create periodic learning opportunities.** Hold regular structured and unstructured learning sessions so that staff and partners share and discuss data and evidence. These can be part of the Collaborating, Learning, and Adapting model in the case of USAID projects and/or exercises internal to project teams. Structured learning events could include learning and reflection sessions, after-action reviews, or discussion of the findings of PEAs. Unstructured learning could include impromptu meetings, individual reviews of data analysis, or dashboard visualizations.

- **Integrate learning and implementation.** To bring learning into management decision-making, experience favors integration of the two. Adaptive management to achieve development objectives in complex settings calls for linking adaptation and learning, as discussed above. Box 5 provides

Box 5. Strategic Learning and Adaptation for Measurable Results

RTI’s Knowledge Sector Initiative (KSI) program in Indonesia, funded by Australia’s DFAT, works to promote evidence-based policy. The modifications that KSI made following strategic learning led to significant policy reform. While providing grants to local research institutes and universities as knowledge producers, KSI staff learned of significant barriers to universities’ ability to compete for government-funded research and commissioned a study that involved key stakeholders such as the Ministry for Research, Technology, and Higher Education.

The collaborative research report included recommendations for procurement reforms to allow universities to compete for public funding. KSI then facilitated a policy working group consisting of relevant universities and government ministries to draft revised procurement policies, which were eventually passed by the Government of Indonesia. As a result, a decades-long barrier for universities was removed, and the government could more freely access the breadth of institutional expertise from Indonesia’s top universities. For example, Gadjah Mada University’s Public Health Center received funding to collect and synthesize input from 15 universities on monitoring local medical services to improve efficiency of the national health system.
an illustration of how these features interact in a MEL system that encourages learning and adaptation to inform project implementation strategy.

Conclusions
Adaptive programming and management have achieved renewed prominence among donor agencies and their implementing partners. Donors’ experimentation with policy and operational reforms has opened space for adaptation and learning. Documentation and discussion of experiences are growing, contributing to better knowledge about both adapting to learn and learning to adapt. These new policies and practices remain works in progress that have yet to become fully mainstreamed in international development.

In conclusion, we draw upon RTI International’s experience to flag several challenges for making progress with adaptive programming and management. These are not unique to our projects; these issues confront most implementers.

- **Do you want a single or double loop?** On the donor side, most progress has been made with introducing practices and procedures that enable flexible responses to evolving contexts during implementation of projects whose designs contain prespecified objectives, outputs, and indicators. As noted above, these practices emphasize single-loop learning, while often employing the terminology of double-loop learning. MEL plans and collaborative project workplan and portfolio reviews build in structured opportunities for double-loop reflection, learning, and adaptation.

- **Predetermined outcomes or truly adaptive programming?** The theory behind DDD, TWP, and adaptive management suggests that open design processes offer benefits in terms of sustainable development outcomes. However, the uncertainty in fully adaptive design creates risks both for donors and implementers. Donors tend to justify their programs to their overseers as delivering predetermined outcomes with a relatively high degree of certainty and low degree of risk. Implementers face problems in staffing, planning, and budgeting when all project parameters are subject to modification.

- **Outcomes or processes?** An issue related to uncertainty and risk is that much of the core of adaptation and learning consists of processes. These are hard to quantify and therefore difficult to measure. They also do not lend themselves to being characterized as outputs, so in the eyes of funders and results-based managers they can lack credibility and acceptability.

- **Cheap learning?** The costs associated with adaptation and learning continue to be underestimated. Ambitious research agendas are developed to support learning, and are fleshed out in MEL plans, but donors then balk at approving the budgets necessary to implement them. Implementers are on occasion told to accommodate research and learning within existing project budgets.

- **Donor or project-driven changes?** Another source of costs derives from donor-driven project shifts and redirection during implementation. Projects may be asked to take on new activities, move geographic location of program activities, modify priorities mid-stream, and so on. This kind of reactive adaptation can consume project staff’s resources in multiple workplan revisions and re-budgeting and can distract from ongoing operations.

- **Where are country actors?** Much of the debate and discussion regarding adaptive programming and management has taken place within the corridors of donor agencies or between donors and implementers, both contractors and grantees. Largely ignored have been country actors, whether in government, civil society, or the private sector. Without their engagement, buy-in, and skills development, adaptive programming and management are unlikely to spread or be sustained. International project implementers may need to focus on helping their country counterparts to confront the same kinds of local systems constraints to flexibility and adaptation that they face with donor agencies.

Several of the challenges we identify here derive from the political economy of foreign aid and constitute constraints that are unlikely to disappear. Currently, donor agencies are confronting an uncertain political environment for development assistance, and when there are funding downturns, the temptation is to fall back on concrete results-driven strategies that promise certainty. However, from our perspective as an implementer working with USAID, DFID, and DFAT, we see interest in, and commitment to, pursuing adaptive programming and management in many of the projects in RTI International’s portfolio. Increasingly we are seeing references to DDD principles, PDIA, TWP, systems thinking, and adaptation in donor procurements.

Our experience and research suggest that adaptive programming and management offer strong promise of achieving enduring results while confronting the uncertainty and complexity inherent in international development. It will be important to continue experimentation and learning regarding the policies, approaches, and tools intended to institutionalize new ways of providing international development assistance.

Further, documenting and sharing such learning can help to demonstrate to donors, implementers, and country partners how adaptive programming and management can contribute to development effectiveness.
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References


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