Project Brief: Sustaining EYP

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| **Date Brief Created:**  | 10/24/2023 |
| **Project Title/Program Name:**  | Sustaining TCF’s Early Year Program |
| **Project Owner Name:**  | Tehreem Fatima |
| **Designation:**  | Project Lead – Lab School |
| **Department:**  | Formal Schools Programme Design/Outcomes |
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| **Other Department(s) involved:**  | Supply Chain |
| **Project Thematic Area:** (Highlight all applicable)

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| * 21st Century Skills
* Early Childhood Education
* Language
* Assessment
* Capacity Building of Teachers
* Multi-Grade Teaching
* School Leadership
* Scholarships
* Higher Education
* Transition to Tertiary Education and Employment
* Secondary Education
* Primary Education
* School Construction
* New Teaching Methodologies
 | * Ed-Tech
* Curriculum and Textbook Development
* Public-Private Partnership
* Out of School Children
* Improving School Management Through Technology
* Infrastructure Development
* External Evaluation
* Community Development
* Adult Literacy
* Clean Water
* Vocational
* Nutrition
* Impact Beyond TCF
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| **Priority:** *-High, Medium, Low (To be determined by EVP)* High |
| **New Project (Un-Budgeted/Part of Existing Opex):**Part of Existing Opex |
| **Project Need:**-Why is there an urgent need for the project / what active problem is the project solving. Please cite numbers / studies conducted to determine need where appropriateThe Problem:Through TCF’s long journey of running schools in urban slums and rural areas of Pakistan since 1996, we realized that the way of teaching, mainly for early childhood education, was very conventional: teacher-centric and content-based, different from 21st century teaching practices which were more student-centered and focused on experiential learning versus textbook learning. When we explored international curriculums, we identified a gap in our schools. Research from all over the world emphasized on the importance of play-based learning for early childhood education. We found that learning in early childhood education needs to involve a system of interaction between the physical environment, teachers, curriculum and materials, mode of interaction, goals, community and context, students and leadership.TCF’s Lab School, a specific school in Gadap, Karachi, aims to create research-aligned content and practices founded in Early Childhood Education (ECE) that build 21st century skills and foster whole-child development and can be scaled to very low-income contexts across Pakistan.  With research at its core, the Lab School is TCF’s testing ground for piloting new interventions as it continues its path towards continuous improvement of its educational models for scaling across its network in Pakistan and for advising local governments on field-tested best practices within education.Benefits of ECE interventions are widely acknowledged with several studies reporting long-term improvement among children who have been through an intervention. A review of 56 studies from Europe, Asia and Africa found that ECE interventions, especially social and educational, had a positive long-term impact on cognitive development of children (Nores & Barnett, 2010). Besides cognitive, numeracy and reading schools, ECE programs are also known to have a positive impact on the long-term development of low-income groups by improving their health, educational and social outcomes (Hahn, et al., 2016).We created a working group to facilitate process and care for the needs of the new early childhood education model within the context of Pakistan, keeping in mind low-resource context in mind. TCF’s vision was to create a model of education that is scalable, resource-efficient, local, and builds multiple intelligences and 21st century skills in line with current research and practices. We then piloted the EYP model in our lab school in Gadap, Karachi in 2017, which showed positive results. The final model, called our Early Years’ Program (EYP), was implemented for the first time in all our flagship schools in 2022. |
| **Type of Project:** -R&D, Pilot, Redesign, Scale-Up, Continuation of Existing Programme)Continuation of existing program |
| **Project’s Theory Of Change:** *-Inputs, Activities, Outputs, Outcomes, Impact* **Problem Analysis:**Research has shown that early childhood is a critical age where children’s brains are rapidly developing and they can build cognitive and socio-emotional skills that set the stage for later success. The environment needed for this includes play-based learning and teachers that nurture a whole child rather than just academic skills. Objective The EYP aims to create research-aligned content and practices that build 21st century skills and foster whole-child development through space re-design, introducing choice time, story time, snack time and fitness time that can be scaled to very low-income contexts across Pakistan. The EYP team is continuously creating, implementing, and refining its content and practices. **Output:**TCF is aiming to achieve improved social skills of students, improved reading and numeracy skills, and improved cognitive skills that students should master in order to succeed in today’s world and economy.   **Outcome**:Through the EYP, TCF specifically aims to cultivate 21st century skills in its students so they can succeed in life and in the workplace. This includes life skills (such as global awareness, civic literacy, social and personal responsibility), learning and thinking skills (critical thinking, problem-solving and collaboration) and digital skills (how to use information to think critically, communicate and solve problems). Developing critical thinking and learning about global citizenship, tolerance and diversity will contribute to peace and development, especially in communities that are traditionally illiterate and conservative.The theory of change of the three components of the Early Years Program (Redesign of Classroom Space, Choice Time and Snack Time) are as follows:* + 1. *Redesign of Classroom Space*

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| Objective | Problems | Interventions | Outcomes (Short Term) | Outcomes (Long Term) |
| Development of 21st century skills: self-regulation, independence, self-led learning, creativity, problem-solving, and curiosity/joy in learning. | * Conventional classroom space posits teacher as the sole authority in the room.
* Conventional classroom space does not allow for multiplicity of activities to take place.
* Conventional classroom space does not allow for independent engagement and exploration.
* Conventional classroom space is dry.
 | * Redesign classroom space by creating floor seating, student-level storage, colored walls and encouraging teachers to create active, rest, and green areas.
* Training teachers.
* Teachers conduct various activities according to the affordance of the space.
 | * Students cater to own needs in the space.
* Students engage with various areas of the space.
* Students are comfortable.
* Students rearrange themselves according to the needs of their activity.
* Teachers’ mindsets about classrooms change.
 | * People who can cater to their own needs in terms of learning.
* People who are curious to learn about new things.
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*Figure 1: Theory of Change of Classroom Space.** + 1. *Choice Time*

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| Objective | Problems | Interventions | Outcomes (Short Term) | Outcomes(Long Term) |
| Development of 21st century skills: self-regulation, independence, self-led learning, creativity, problem-solving, and curiosity/joy in learning. | * In classes, all activities tend to be determined by teacher interests and objectives which does not give students the opportunity for self-driven learning.
* In classes, play, the primary tool for children to learn, is not given enough emphasis
* Teachers do not know how to facilitate open-ended conversations.
 | * Introducing Choice Time as a bi-weekly practice in schools.
* Training teachers.
* Delivery of toys to schools.
* Toy guides are sent to schools.
* Choice Time gets implemented as per schedule.
* Utilization of toy guides.
* Parent communication sessions are conducted.
 | * Children engage with a variety of toys.
* Children engage with both collaborative and independent toys.
* Children slowly move towards complex creation.
* Children slowly move towards being able to talk about their creation.
* Teachers' mindsets about learning and interaction change.
 | * Creativity.
* Critical thinking/problem-solving.
* Confidence in expressing interests.
* Collaboration/Sharing.
* Empathy.
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*Figure 2: Theory of Change of Choice Time** + 1. *Snack Time*

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| Objective | Problems | Interventions | Outcomes (Short Term) | Outcomes(Long Term) |
| Development of sense of community in the classroom to create a positive social-emotional learning space. | * Poor health and hygiene practices.
* Classes emphasize academic learning rather than socio-emotional learning.
* Classes emphasize teacher-student interaction in an unequal power dynamic.
* Health and hygiene as talking-points/buzzwords rather than as embedded daily practices.
* Parent information about nutrition is poor.
 | * Introduce Snack Time as daily practice in schools.
* Training teachers.
* Delivering *dastarkhwans* to schools.
* Teachers conduct parental awareness sessions.
* Teachers conduct Snack Time.
* Teachers embed games, good practices, and conversations in Snack Time.
 | * Children start bringing home-cooked and healthy food to school.
* Children interact and share.
* Children wash hands before eating.
* Children take responsibility to clean up the room
* Children display good etiquette while eating.
* Teachers' mindsets about learning and interaction change.
 | * Student-teacher bonding.
* Better informed parents.
* Healthier children.
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*Figure 3: Theory of Change of Snack Time.* |
| **Project Description:**-What, How-What does the project entail?-What are the objectives, key features, deliver, etc.?The EYP is basically an updated curriculum and teaching and learning experience for early childhood education (from kindergarten to Grade 2) at TCF schools which incorporates the goals of:* Artistic and athletic ability
* Environment, health and community consciousness
* Interpersonal and communication skills
* Confidence
* Strength of character and conduct
* Emotional wellbeing
* Academic excellence and conceptual understanding
* Curiosity, critical thinking and creative problem-solving

These goals combined with 21st century skills, play-based learning, and experiential learning are what guide the development and implementation of the EYP curriculum. Components of the EYP include:* **Space Re-Design** allows students to lead and self-regulate, and makes the classroom a flexible and engaging environment to learn. This includes implementing floor seating which allows flexibility and comfort, and low-heighted tables, shelves and green boards to increase accessibility.
* **Choice Time** develops crucial social, critical thinking, imaginative, and self-regulation skills by providing children opportunities to choose their own activity and enabling teachers to enrich and facilitate their play. Children are free to play with a range of curated toys to explore their interests and develop social and cognitive skills (such as teamwork, vocabulary, creativity, conflict resolution) for 40 minutes every day. The team has curated and developed toys that are associated with skill development. Teachers are trained to gently guide children at certain moments but allow them the agency to play with them independently or in small groups. Play based learning has four main components: Joyful learning, Interactive (based on real world concepts), iterative, and is meaningful. Around 15-20 toy sets have been developed for each grade from kindergarten to grade 2 up till now.
* **Story Time,** to embed reading as an important daily practice. TCF has developed over 90 engaging Urdu storybooks to explore themes, foster a love of joyful, meaningful and context-appropriate reading in Urdu and challenge stereotypes. Exposure to storybooks at an early age inculcates creativity and critical thinking by exposing children to the wider world, encouraging them to exercise their imagination and challenge norms (especially gender). It also creates motivation and interest in wanting to learn to read in an engaging environment rather than being forced to learn to read.
* **Fitness Time** as well as **Snack Time** to build body and health-awareness daily. Easy-to-use manuals have been developed which enables teachers with no prior exposure to safely engage in these wellness practices with their students daily.
* **Fitness Time** happens twice a week for 15 minutes in the morning and helps develop mindfulness and physical wellness by adopting a daily practice of caring for the body through yoga and exercise.
* **Snack Time** occurs in the middle of the day for 30 minutes to encourage healthy eating practices which are affordable for low-income families. It also includes outdoor play for 15 minutes. Students and teachers get together on the floor in a circle to eat lunch together.
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| **Project Deliverables:***-Specific measurable end results that you're aiming to produce at specific points during your project*At the end of Grade 2 (which is the end of the Early Years’ Program), want the student to have an awareness of the following:* Critical thinking
* Creativity
* Sustainability
* Emotional awareness
* Health and wellness awareness
* Conceptual understanding
* Social awareness
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| **Project Activities and Timeline:***Breakdown of activities and realistically scheduled timeline. Is timeline flexible? Is it dependent on grant funding? If not flexible, then how soon do we need funds?)**-Please note that grants take up to one year before funds disbursal* The project kicked off in all of TCF’s flagship schools in 2022 when the foundations of the project were laid. This mainly included the space re-design component of the program (the initial setup of the project) and has already been funded for. In the subsequent years, with the project set up already, now the focus in on running the curriculum in the classrooms and major costs are replenishment and replacement of damaged or worn-out materials, toys and books. Thus, the EYP now consists of running the program in TCF schools following the set curriculum and replenishing and replacing damage or worn-out materials, toys and books. |
| Project FindingsDuring 2019–2020, three interventions were scaled across TCF schools in Sindh. These interventions, collectively referred to as the Early Years Redesign Program (EYRD), are; Redesign of Classroom Space, Choice Time, and Snack Time. After some time, Fitness Time was also scaled as part of EYRD (a separate evaluation was done for this- results from the evaluation listed immediately below does not include Fitness Time- Fitness Time results are separately listed below). EYRD was implemented in KG, grade 1 and grade 2 in all schools across Sindh. The EYRD program evaluation was conducted by TCF’s Research and Knowledge Sharing Department. Baseline data was collected in 2020 and endline data was collected in 2022. The objective of the evaluation was to determine whether and what kind of changes there are in the various stakeholders involved in the interventions.In terms of monitoring and evaluation tools used during the time of project baseline and end-line assessments, the following were used for **students**:* Bryant Empathy Index to measure changes in empathy
* Guilford Alternative Uses Test to measure changes in creativity
* School Coping Scale to measure changes in problem-solving abilities
* Adaptive Social Behavior Inventory to measure changes in confidence, collaboration, and sharing
* Young Children’s Appraisal of Teacher Support to measure changes in student-teacher bonding
* School Comfort Scale to assess students’ comfort with the school, teachers, and classroom

In terms of monitoring and evaluation tools used during the time of project baseline and end-line assessments, the following were used for **principals, teachers and parents**:* Interviews with principals to gauge changes in principals’ mindsets about learning and interaction
* Focus group discussions with teachers to gauge changes in teachers’ mindsets about learning and interaction
* Focus group discussions with parents to gauge their awareness about play-based learning and socio-emotional health, and their understanding of 21st century skills and what children should be learning in school

Results:* Bryant Empathy Index: No statistical difference was seen from baseline to endline results when measuring empathy.
* Guilford Alternative Uses Test: A significant increase in creativity was seen for KG and Grade 2; no observed difference was seen in Grade 1.
* School Coping Scale: No statistical difference was seen from baseline to endline results when measuring problem-solving.
* Young Children’s Appraisal of Teacher Support: When measuring student-teacher bonding, the Difference in Difference (DiD) estimates for KG and Grade 2 are significant at a 99% confidence level. For Grade 1, it’s at a 95% confidence level.
* School Comfort Scale: When measuring comfort and joy, an increase at 95% confidence level was observed for KG students but no significant increase for Grades 1 and 2. The scores for the control group, however, were already at 99%, therefore leaving no substantial effect on overall scores.
* Adaptive Social Behavior Inventory: When measuring confidence, collaboration and sharing, the results were not significant.

(Note on above Results: These evaluation results are not completely reliable because of COVID-19 disruption and the evaluation was led by multiple people due to which the understanding of the tool its implementation and results aren’t very accurate. The scale was based on the process evaluation which evaluated the ease of implementation and design and direct feedback from ground being positive.)Fitness Time Results:TCF conducted a process evaluation at 19 schools in Karachi, Gadap, where Fitness Time was taking place. Observers noted that in 76% of all classrooms, teachers asked consolidation questions at the end. Students responded to these consolidation questions by saying that they had fun and liked the poses. 12% of teachers’ responses also said that they try the poses at home. 42.9% of principals’ responses mentioned that students feel excited about Fitness Time. Another 33% of principals’ responses mentioned that students appear to enjoy Fitness Time. In 42.9% of classrooms, observers reported that students appeared to enjoy Fitness Time. 5% of principals’ responses mentioned that students try to bring healthier lunches on days Fitness Time takes place.Learnings and Insights:

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| **Outcomes** | **Group** | **Learnings and Insights** |
| **Student-Teacher Bonding** | Children | All three grades saw a significant increase in student-teacher bonding. The way EYRD classrooms are structured allow students to interact with their teachers in a friendlier manner, especially during Choice Time and Snack Time. This confirms previous findings from Mortlock (2015), who noted that interactions between adults and children were positive during snack times.  |
| **Creativity** | Children | KG and Grade 2 showed a significant increase in creativity. Previous findings from Singer and Singer’s (1990) study noted that the cognitive processes employed during play are also employed in creative activities, which could be one reason why creativity may have increased for KG and grade 2 students. |
| **Comfort and Joy** | Children | KG students showed a significant increase in comfort and joy. This could be because KG students had only just begun school at baseline and had time to get comfortable with the school environment at endline. KG students from the control group were already at a higher percentage of comfort and joy at baseline; perhaps because control group assessments took place nearly four months after treatment group assessments. Students in grade 1 and grade 2 already showed higher levels of comfort and joy which could be due to other interventions already taking place at the schools.  |
| **Empathy** | Children | Empathy did not increase across all three grades. An abstract concept like empathy can be difficult to measure. Bryant’s definition of empathy in just one facet of a much larger concept. This index measures only children’s perceptions of how they would respond in certain situations, their real-life responses could be different. |
| **Problem-Solving** | Children | Problem-solving did not increase across all three grades. Problem-solving is affected by numerous external factors and is highly dependent on a child’s natural vulnerability and risk and environmental factors, which could be one reason why it may not have increased. |
| **Confidence, Collaboration and Sharing** | Children | These outcomes did not increase across all three grades. Such a result could have occurred due to the small sample size. The ASBI was reported by teachers, and teacher reports on students can often be inaccurate. |
| **Change in principals’ mindsets about learning and interaction.** | Principals | At baseline, principals displayed an awareness of the importance of a colorful classroom and teaching through fun activities. By the endline phase, principals agreed that Choice Time and Snack Time are important for children’s learning. They also laid emphasis on student-teacher bonding and believed that teachers should be friendly with students. |
| **Change in teachers’ mindsets about learning and interaction.** | Teachers | At baseline, teachers laid emphasis on good manners as a crucial life skill. By endline however, the most prevalent opinion was that confidence is the most crucial life skill. A friendly relationship between students and teachers was also a more prevalent opinion at endline as compared to baseline. By endline, teachers also emphasized on the importance of a colorful classroom. At both baseline and endline, teachers pointed out that a free and flexible classroom environment is important for students. |
| **Greater awareness of play based learning; greater awareness of 21st century skills; an understanding of what children should be learning in school.**  | Parents | At both baseline and endline, parents laid emphasis on academic work being the most important part of school. However, by endline parents also believed that playing games at school is also important for children. A small percentage of parents also believed that children should do art and painting at school. |
| **Greater awareness of socio-emotional health.** | Parents | At baseline, most parents held the belief that teachers should be friendly towards students. By endline, parents believed that teachers should show love and affection to children in their classrooms. |

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| **Monitoring and Evaluations***-How is the project monitored and evaluated? How will the project be monitored and evaluated?*In terms of controls, we have set materials required for the project for each school which include mats, storybooks, furniture (such as low-heighted tables, shelves and green boards), toys, and teacher manuals. The materials are frequently checked by the teachers and principals who are asked to inform the head office if any materials are missing or damaged and need to be repaired or replenished. A teacher is always present during the classes. We also have a digitized training pack which is a self-paced online training for teachers. The school principal also takes it but supervises the training of teachers by making sure new teachers go through the training and if older teachers need a refresher course. The training takes around four weeks and every teacher of the EYP has to take it.  |
| **Project Risks and Mitigation***-What are the risks associated? What is the plan to mitigate them?*In the initial phase of the program, we had some steel toys but chose to discard them as they had sharp edges. Thus, one risk is if a toy breaks or can hurt the child but to mitigate this risk we review and check all the toys to ensure that they are age-appropriate. For example, we found that Lego is small for children (can be a choking hazard) so we use bigger blocks for play. In Fitness time, we have made sure that the exercises and poses are easy for children to do. During training, to mitigate the risk of a child getting hurt, teachers are also told to be mindful of children’s limits.Some teachers struggle to adopt the new teaching methods: Training of Principals ensures they are able to provide regular support and backup to teachers through monthly training sessions. TCF holds an annual round of teacher training in order to ensure that teachers’ content knowledge and pedagogy is at the highest possible standard. Regular monitoring visits by area and regional teams asses teachers' performance and highlight areas for improvement, which are focused upon in subsequent training sessions.Parents struggle to accept a model of education that emphasizes play and experience rather than textbooks and exams: Parental engagement is important therefore regular parent teacher meetings will take place. Principals and teachers are hired from adjoining communities and are encouraged to build close linkages with parents and community members. They meet with the community regularly in order emphasize on new techniques for teaching and learning and girls' education.Programmatic activities are not completed within timelines: Program oversight team to make regular visits to sites to ensure work is completed in a timely manner. Regular meetings with team members to identify red flags and suggest solutions. Procurement of construction materials at an earlier date to ensure timely completion of activities. Earlier deadlines for delivery of digital teacher training materials to ensure adequate time for reviewing and finalizing draft content. |
| **Sustainability**The program’s initial material costs are part of TCF’s build-a-school cost, so the donor who is taking the initiative to fund the building of a school pays for the initial setup of the program. The recurring yearly costs which TCF is now fundraising for are only to sustain the program across TCF’s network of flagship schools all over Pakistan. This mainly includes replenishment and replacement of damaged materials, toys, and books.As the cost of build-a-school (construction value) and support a school (operational value) has increased significantly in the last few years due to Pakistan’s soaring inflation rate, we have decided to separately raise funds for the sustenance of the EYP. |
| **Scalability/Replicability**The program was developed as an easily scalable project. It started off its design phase in the lab school, then was scaled to one TCF area for process and impact evaluation, then to the region, and eventually across TCF’s entire school network of flagship schools. The scale-up from design to the entire TCF flagship school network was smooth and successful. |
| **Project Budget:** *-Add more cells if you want to show it year-wise or if you want to add more expense heads**-Please get project budget approved by finance before submitting*

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| **Expense Head** | **Amount (PKR)** | **Assumptions** | **Explanation** |
| Chattai (made of threaded plastic and is used for warm areas) | 21,760,668 | 20% inflation; 1,226 FS and 189 PS classes | Chattai (mats) need to be replaced each year as they get worn out with use throughout the year. |
| Chattai (made of cloth which is thick and is used for cool areas) | 10,065,000 | 1,710 FS and 120 PS classes | Chattai (mats) need to be replaced each year as they get worn out with use throughout the year. |
| EYRD - Toys | 47,817,000 | 40% inflation; 30% replenishment cost in FS classes plus new units in FS and PS | This cost is for the replacement of the toys of the program which are damaged, worn-out or missing across TCF’s network of flagship schools. |
| **Total**  | **79,642,668** |  |  |

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| **How much of this is already funded?** *-Add more cells if required*

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| **Total Sustaining EYP Budget FY 2023–24** | **Donor 1: UBS Match** | **Donor 2: UBS previous grant underspend** | **Donor 3: Dinshaw Family accounts** | **Unfunded** |
|  | CHF 241,088=79,491,873 PKR (using 1 CHF to 330 PKR) | USD 96,407=26,993,960 PKR (using 1 USD to 280 PKR) | 1,800,000 PKR |  |
| 79,642,668 | 79,491,873 | 26,993,960 | 1,800,000 | –28,793,960 |

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| **Future Plans***-What are the future plans of the project*For the year 2023-24, the plan is to:* Create a replenishment process for the Early Years’ Program resources.
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| **Project Owner(s) For Sign Off:**

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| --- | --- | --- | --- |
| **Name** | **Department** | **Designation** | **Approval Status** |
| Tehreem Fatima | Formal Schools Programme Design | Project Lead – Lab School |  |
| Azma Humayun | Formal Schools Programme Design | Head of Academics – Formal Schools |  |
| Sadaf Asir Hasan | Outcomes | GM - FSPD |  |
| Shazia Kamal | Outcomes | EVP – Outcomes |  |

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