

2021 RWANDA



# Health and Development Resilience in the Face of COVID-19



Bill & Melinda Gates Institute for  
Population and Reproductive Health  
Department of Population, Family  
and Reproductive Health



CIDRAI CENTER FOR INTEGRATED DEVELOPMENT  
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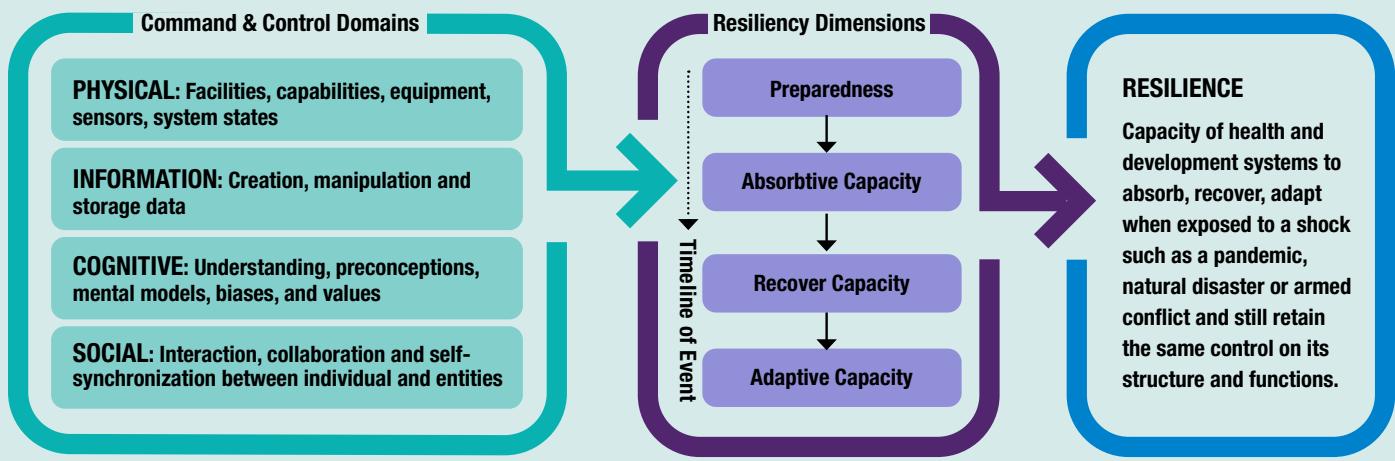
# Health and Development Resilience in the Face of COVID-19

Considering the health and socioeconomic impacts of COVID-19, and its close relationship with policies that enable a DD-favorable policy environment, this DDEI has integrated a module to assess the resilience and sustainability of systems in each sector. The scoring follows existing frameworks and key principles of sustainable and resilient systems that can effectively respond to adverse events, security attacks, emerging infectious disease threats and other public health emergencies.

Our framework, presented in Figure 12, is an adaptation of existing frameworks to measure resilience in different sectors

by Blanchet et al. and Linkov et al. This framework combines the National Academy of Sciences (NAS) recommended four stages of event management cycle that are needed for a system to be resilient and the four domains proposed by the Network-Centric Warfare (NCW) doctrine that ensure a shared awareness of the situation and inform effective decision making across system levels.<sup>12, 13</sup> Due to the critical importance of timely intervention and frequently irreversible impact of delayed action as proven by the COVID-19 pandemics, an additional element was added to assess timeliness of interventions to mitigate the impact of the crisis.<sup>14, 15</sup>

**Figure 12.** A conceptual framework: Health and Development Systems resilience domains.



Source: Adapted from Blanchet et al. (2017)<sup>16</sup> and Linkov et al. (2013)<sup>15</sup>.



## Sectoral Resiliency Summary Results

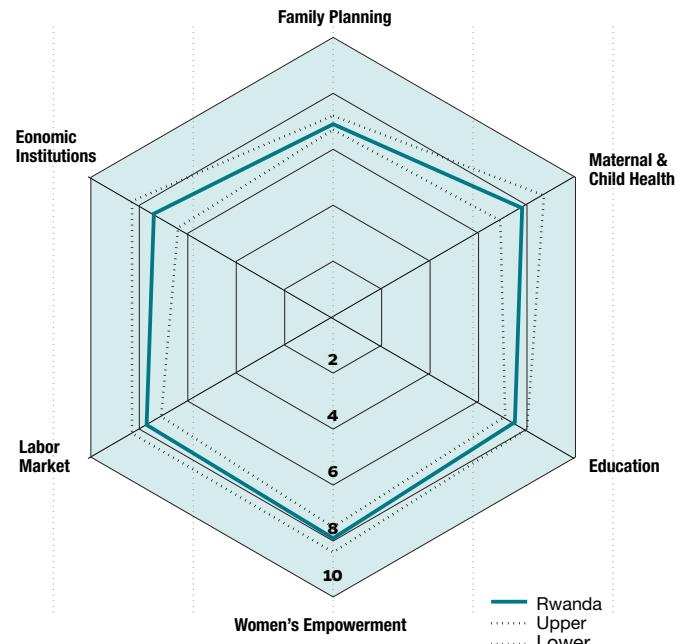
Up to 25 questions were asked over the 4 Command and Control Domains, pertaining to each of the Resiliency Dimensions. Responses were recorded on a Likert scale of 1 to 10, where 1 represents the lowest score (poor state/capability) and 10 represents the highest score (great state/capability). This resulted in a total of **50** surveys completed for the module across all sectors: FP (7), MCH (8), ED (6), WE (15), LM (9), GEI (5). Results by sector are presented in Figure 13. The score values are as follows:

- |                                      |                                      |
|--------------------------------------|--------------------------------------|
| 1. FP: <b>6.9</b> (95% CI: 6.7-7.2)  | 4. WE: <b>7.9</b> (95% CI: 7.5-8.4)  |
| 2. MCH: <b>7.8</b> (95% CI: 6.6-8.7) | 5. LM: <b>7.7</b> (95% CI: 7.1 -8.3) |
| 3. ED: <b>7.5</b> (95% CI: 7.1-8.0)  | 6. GEI: <b>7.4</b> (95% CI: 6.4-8.3) |

Confidence intervals are presented in the dotted lines to show the upper and lower bounds.

The overall resiliency score of the six sectors is **7.6** (95% CI: 7.4-7.8).

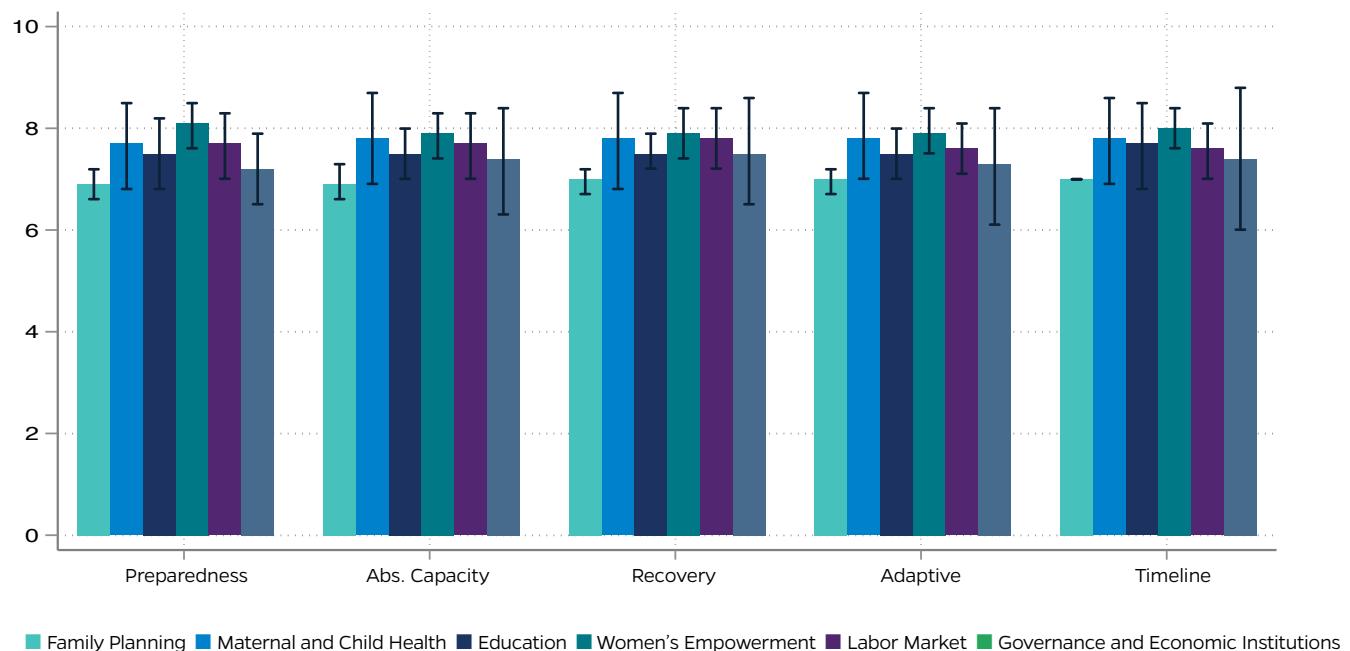
**Figure 13:** Radar plot of DDEI results across all sectors in Rwanda.



## Resiliency Module Results Across Sectors

The resiliency module results across sectors, by resilience dimension, are presented in Figure 14. This demonstrates the wide variations in scores within and across DDEI sectors.

**Figure 14:** Bar chart of resilience module results across DDEI sectors, by resiliency dimensions in Rwanda.





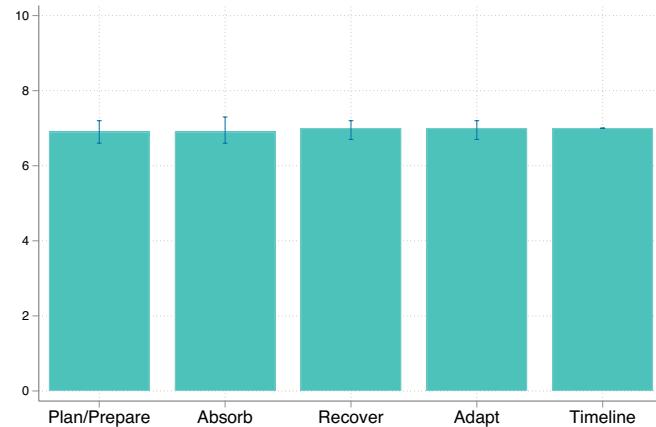
## Family Planning Resiliency Scores

The FP sector survey included questions ranging across the four resiliency dimensions: preparedness, absorptive capacity, recovery capacity, and adaptive capacity, in addition to the timeline of responsiveness. Perceived resiliency scores are presented in Figure 15. The results are based on responses from **7** FP experts working in Rwanda. The scores for each dimension within FP are as follows:

1. Preparedness: **6.9** (95% CI: 6.6-7.3)
2. Absorptive Capacity: **6.9** (95% CI: 6.6-7.3)
3. Recovery Capacity: **7.0** (95% CI: 6.7-7.2)
4. Adaptive Capacity: **7.0** (95% CI: 6.7-7.2)
5. Timeline: **7.0** (95% CI: 7.0-7.0)

Based on weighted statistical analysis, the overall score for the level of resiliency in the FP sector is **6.9** (95% CI: 6.7-7.2).

**Figure 15.** Bar chart of resiliency results in the FP sector in Rwanda, by dimension.



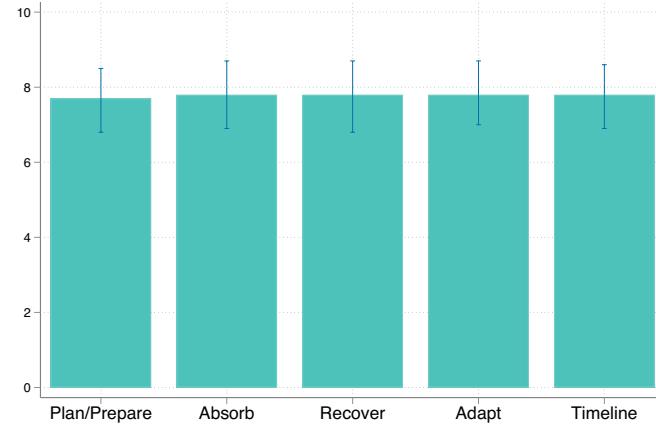
## Maternal and Child Health Resiliency Scores

The MCH sector survey included questions ranging across the four resiliency dimensions: preparedness, absorptive capacity, recovery capacity, and adaptive capacity, in addition to the timeline of responsiveness. Perceived resiliency scores are presented in Figure 16. The results are based on responses from **8** MCH experts working in Rwanda. The scores for each dimension within MCH are as follows:

1. Preparedness: **7.7** (95% CI: 6.8-8.5)
2. Absorptive Capacity: **7.8** (95% CI: 6.9-8.7)
3. Recovery Capacity: **7.8** (95% CI: 6.8-8.7)
4. Adaptive Capacity: **7.8** (95% CI: 7.0-8.7)
5. Timeline: **7.8** (95% CI: 6.9-8.6)

Based on weighted statistical analysis, the overall score for the level of resiliency in the MCH sector is **7.8** (95% CI: 6.9-8.7).

**Figure 16.** Bar chart of resiliency results in the MCH sector in Rwanda, by dimension.



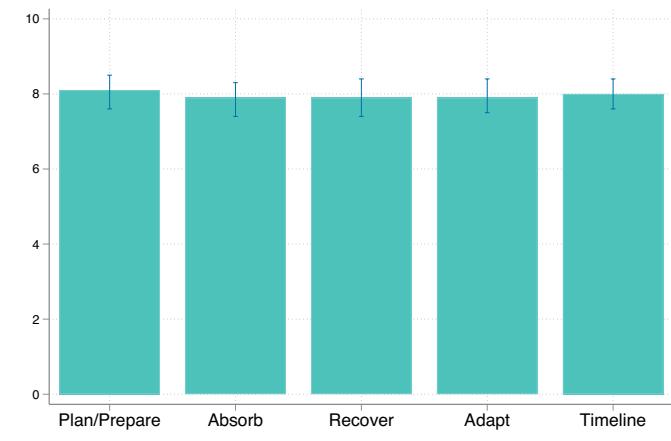
## Women's Empowerment Resiliency Scores

The WE sector survey included questions ranging across the four resiliency dimensions: preparedness, absorptive capacity, recovery capacity, and adaptive capacity, in addition to the timeline of responsiveness. Perceived resiliency scores are presented in Figure 17. The results are based on responses from **15** WE experts working in Rwanda. The scores for each dimension within WE are as follows:

1. Preparedness: **8.1** (95% CI: 7.6-8.5)
2. Absorptive Capacity: **7.9** (95% CI: 7.4-8.3)
3. Recovery Capacity: **7.9** (95% CI: 7.4-8.4)
4. Adaptive Capacity: **7.9** (95% CI: 7.5-8.4)
5. Timeline: **8.0** (95% CI: 7.6-8.4)

Based on weighted statistical analysis, the overall score for the level of resiliency in the WE sector is **7.9** (95% CI: 7.5-8.4).

**Figure 17.** Bar chart of resiliency results in the WE sector in Rwanda, by dimension.





## Education Resiliency Scores

The ED sector survey included questions ranging across the four resiliency dimensions: preparedness, absorptive capacity, recovery capacity, and adaptive capacity, in addition to the timeline of responsiveness. Perceived resiliency scores are presented in Figure 18. The results are based on responses from **6** ED experts working in Rwanda. The scores for each dimension within ED are as follows:

1. Preparedness: **7.5** (95% CI: 6.8-8.2)
2. Absorptive Capacity: **7.5** (95% CI: 7.0-8.0)
3. Recovery Capacity: **7.5** (95% CI: 7.2-7.9)
4. Adaptive Capacity: **7.5** (95% CI: 7.0-8.0)
5. Timeline: **7.7** (95% CI: 6.8-8.5)

Based on weighted statistical analysis, the overall score for the level of resiliency in the ED sector is **7.5** (95% CI: 7.1-8.0).



## Labor Market Resiliency Scores

The LM sector survey included questions ranging across the four resiliency dimensions: preparedness, absorptive capacity, recovery capacity, and adaptive capacity, in addition to the timeline of responsiveness. Perceived resiliency scores are presented in Figure 19. The results are based on responses from **13** LM experts working in Rwanda. The scores for each dimension within LM are as follows:

6. Preparedness: **4.2** (95% CI: 3.1-5.3)
7. Absorptive Capacity: **5.1** (95% CI: 4.1-6.0)
8. Recovery Capacity: **4.8** (95% CI: 3.9-5.7)
9. Adaptive Capacity: **5.0** (95% CI: 4.0-6.1)
10. Timeline: **5.9** (95% CI: 4.8-7.0)

Based on weighted statistical analysis, the overall score for the level of resiliency in the LM sector is **4.9** (95% CI: 3.9-5.8).



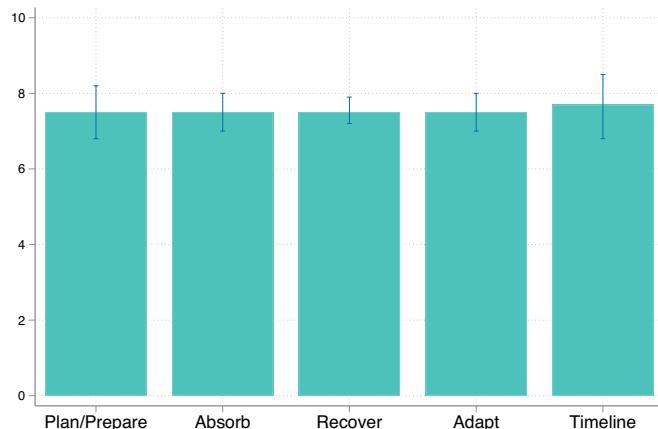
## Governance and Economic Institutions Resiliency Scores

The GEI sector survey included questions ranging across the four resiliency dimensions: preparedness, absorptive capacity, recovery capacity, and adaptive capacity, in addition to the timeline of responsiveness. Perceived resiliency scores are presented in Figure 20. The results are based on responses from **5** GEI experts working in Rwanda. The scores for each dimension within GEI are as follows:

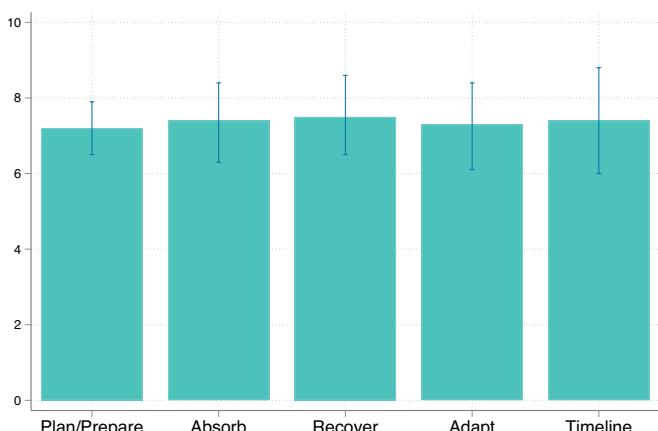
11. Preparedness: **6.2** (95% CI: 3.4-8.9)
12. Absorptive Capacity: **6.8** (95% CI: 4.6-9.1)
13. Recovery Capacity: **5.9** (95% CI: 2.5-9.3)
14. Adaptive Capacity: **6.4** (95% CI: 3.4-9.3)
15. Timeline: **7.2** (95% CI: 4.8-9.6)

Based on weighted statistical analysis, the overall score for the level of resiliency in the GEI sector is **6.4** (95% CI: 3.6-9.1).

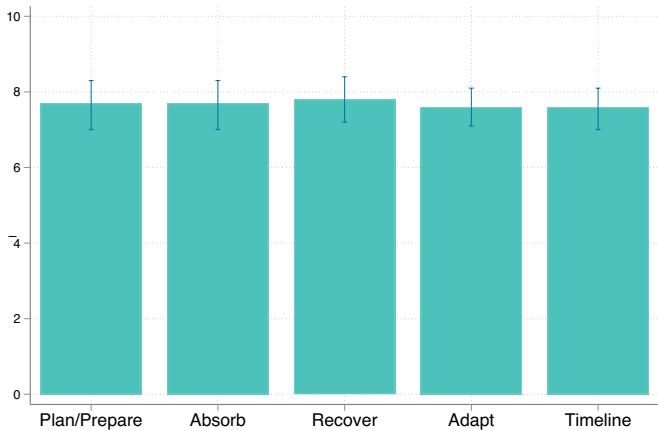
**Figure 18.** Bar chart of resiliency results in the WE sector in Rwanda, by dimension.



**Figure 19.** Bar chart of resiliency results in the LM sector in Rwanda, by dimension



**Figure 20.** Bar chart of resiliency results in the GEI sector in Rwanda, by dimension.



# Key Effort Levers to Improve Health and Development Resilience

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## Preparedness

- 1. FP:** Enhance the capacity of decentralized health facilities (health posts and health centers) and CHWs to facilitate IEC in SRH and access to FP services during periods of crisis, integrate emergencies preparedness and responsiveness provisions into routine FP policies.
- 2. MCH:** Periodically conduct health system capacity building towards improving MCH and develop long term disaster plans that give clear guidelines that keep women and children wellbeing.
- 3. WE:** Ensure that preparedness policy and legal frameworks and action plans are gender-responsive enough to adequately address GE and WE to mitigate humanitarian and emergency crises.
- 4. LM:** Scale up social protection programs to support more vulnerable population in rural and urban for the business continuity and strengthen coordination of labour market demand-supply and systems in generation and use of labour market information.
- 5. ED:** Strengthen collaboration between the public and private education system, and digitize curriculum and training and provide ICT infrastructure and equipment to all learning institutions.
- 6. GEI:** Strengthen national disaster management system and put in place recovery plans to support people who will be affected by crisis and emergency situations.

## Recovery capacity

- 1. FP:** Improve collaborative mechanism and knowledge sharing experience to enhance systematic recovery during crisis and ensure continuity and access to services during emergencies.
- 2. MCH:** Ensure proper capacity building of health personnel and maintaining adequate MCH supplies and commodities to provide services and strengthen real time data reporting on MCH for quick interventions.
- 3. WE:** Ensure that gender-mainstreaming and legal frameworks and strategies and action plans are put in place and mobilize resources to mitigate the effects of humanitarian and emergency crises.
- 4. LM:** Set up a strong recovery policy to enable SMEs and big companies to successfully manage the impact of the crisis and develop sustainable solutions to economic shocks and implement a social protection mechanism for unprotected workers.
- 5. ED:** Learn from experience on how schools cope with pandemic and set up national guideline to effectively respond to any similar pandemic.
- 6. GEI:** Ensure transparent and accountable system of management of interventions and resources to avoid any misuse and embezzlement.

## Absorptive capacity

- 1. FP:** Enhance IEC on RH and FP programs and facilitate public awareness outreaches on private sector, religious affiliations, CSOs, private health facilities, youth centers, FP clubs, local community leaders, schools, and strengthen the capacity of HF in emergency preparedness.
- 2. MCH:** Enhance community directed interventions related to MCH and expand an integrated MCH package at the CHWs and lowest level of HF (health centers, health posts).
- 3. WE:** Strength the public awareness on women's rights, and the role of gender-mainstreaming to achieve GE and WE ends.
- 4. LM:** Support young and women entrepreneurs and foster deeper production linkages among the economic sectors and strengthen real time use of labour market data.
- 5. ED:** Support education system in their strives to get to quality of education and ensure that schools receive the necessary resources so that access and quality of education does not suffer and capacity building of teachers/trainers and lecturers on using new technologies.
- 6. GEI:** Enforce E-procurement and e-payment systems and regulations that apply during emergencies/ disasters to enhance accountability and avoid embezzlement of public fund.

## Adaptive Capacity

- 1. FP:** Foster the FP program and mitigate the effect of the pandemic on the distribution chain and accessibility of the FP commodities and services and enhance service delivery and data management
- 2. MCH:** Support more on the MCH programs to mitigate the effect of crisis and support undeserved people due to the crisis.
- 3. ED:** Foster e-learning and distance learning and leverage IT to serve in the education system in order to contribute to adaptive capacity of the system and continuous review of curriculum at all levels of education and training to incorporate emerging issues.
- 4. WE:** Advocate for the WE and woman's rights and take advantage of opportunities, or respond to consequences effectively in their endeavors towards meeting GE and WE and build capacity to improve women empowerment.
- 5. LM:** Support all enterprises to ensure their survival during such pandemics and digitize operations in organizations for enhanced service delivery.
- 6. GEI:** Strengthen the decentralization policy and encourage local participation in the formulation of economic and social policies and ensure ownership of such policies by the stakeholders.

## References

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