

Establishing Baseline Open Source Repository Metrics Using Maturity Models



DIGITAL SERVICE AT CMS

Authors: Natalia Luzuriaga, Isaac Milarsky, Remy DeCausemaker, Aayat Ali

Digital Service at the Centers for Medicare and Medicaid Services (DSAC)

The Digital Service at the Centers for Medicare and Medicaid Services (DSAC) improves the healthcare system by deploying designers, engineers, product, and policy experts on a 'tour of duty' to work alongside dedicated civil servant.

These multidisciplinary teams follow "The Digital Services Playbook [1]" to modernize systems, processes and policies. Plays from the book include agile development, data driven decision making, continuous delivery, user research, service design, and open source development.

The way we are implementing the final 'play' from the book, open source best practices, is in the form of an Open Source Program Office, or OSPO, who's function is:

"Establishes and maintains guidance, policies, practices, and talent pipelines that advance equity, build trust, and amplify impact across CMS, HHS, and Federal Open Source Ecosystems by working and sharing openly."

Though our OSPO is the first of it's kind at a United States Federal Agency, OSPOs are a well-established approach [2] to Digital Transformation, and key enabler between industry, academia, big tech, and government, at local, national, and international levels around the world.

[1]: <https://playbook.cio.gov>
[2]: <https://todogroup.org>

Business Value of an OSPO



Acknowledgements

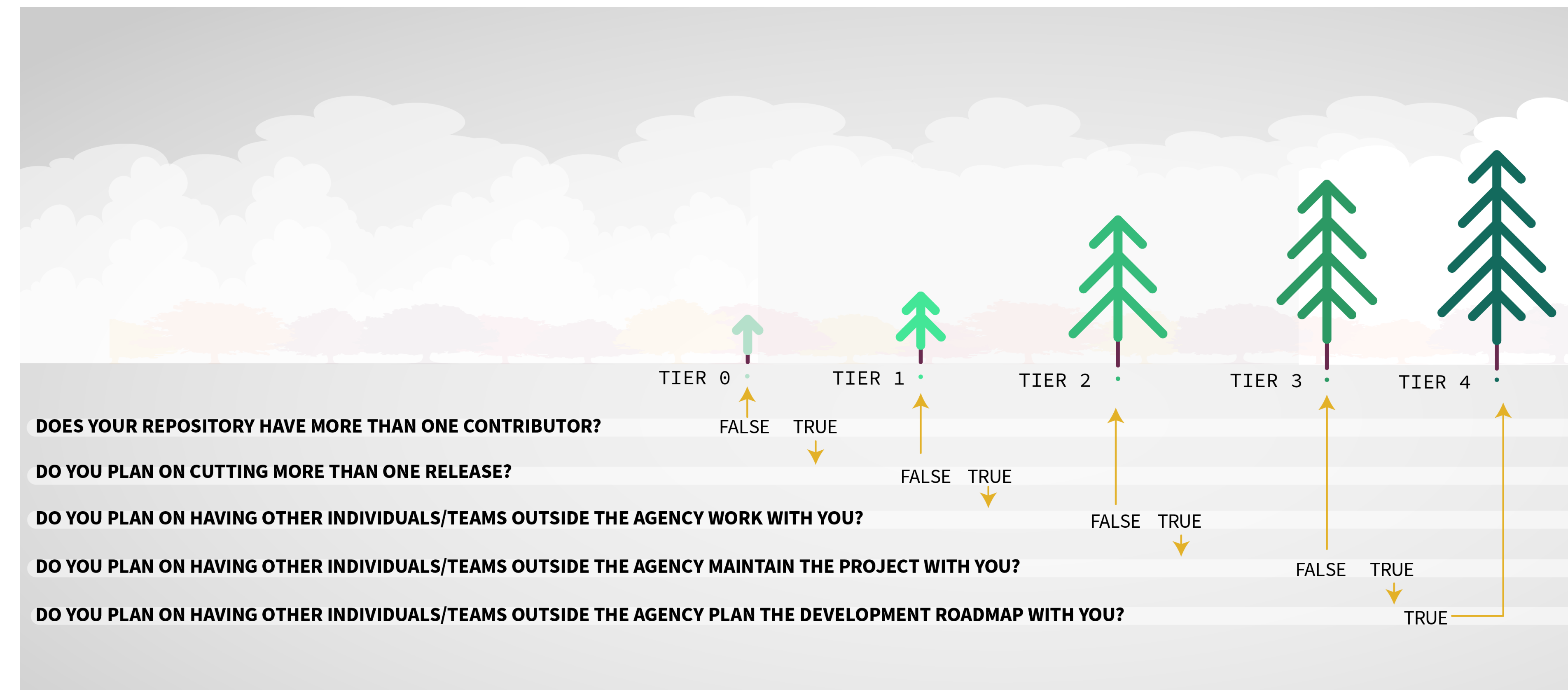


- <https://www.hhs.gov/>
- <https://todogroup.org/>
- <https://www.cisa.gov/>
- <https://chaoss.community/>
- <https://digit.alcorps.gsa.gov/>
- <https://www.usdigitalresponse.org/>
- <https://www.urbanalliance.org/>
- <https://codingitforward.com/>
- <https://www.cms.gov/digital-service>

Repository Maturity Models

To figure out where you're going, you must first understand where you're at. Open Source Projects and Program Offices have built a variety of tools to establish where their repos are at, and to orient the direction of where they want their repos to go.

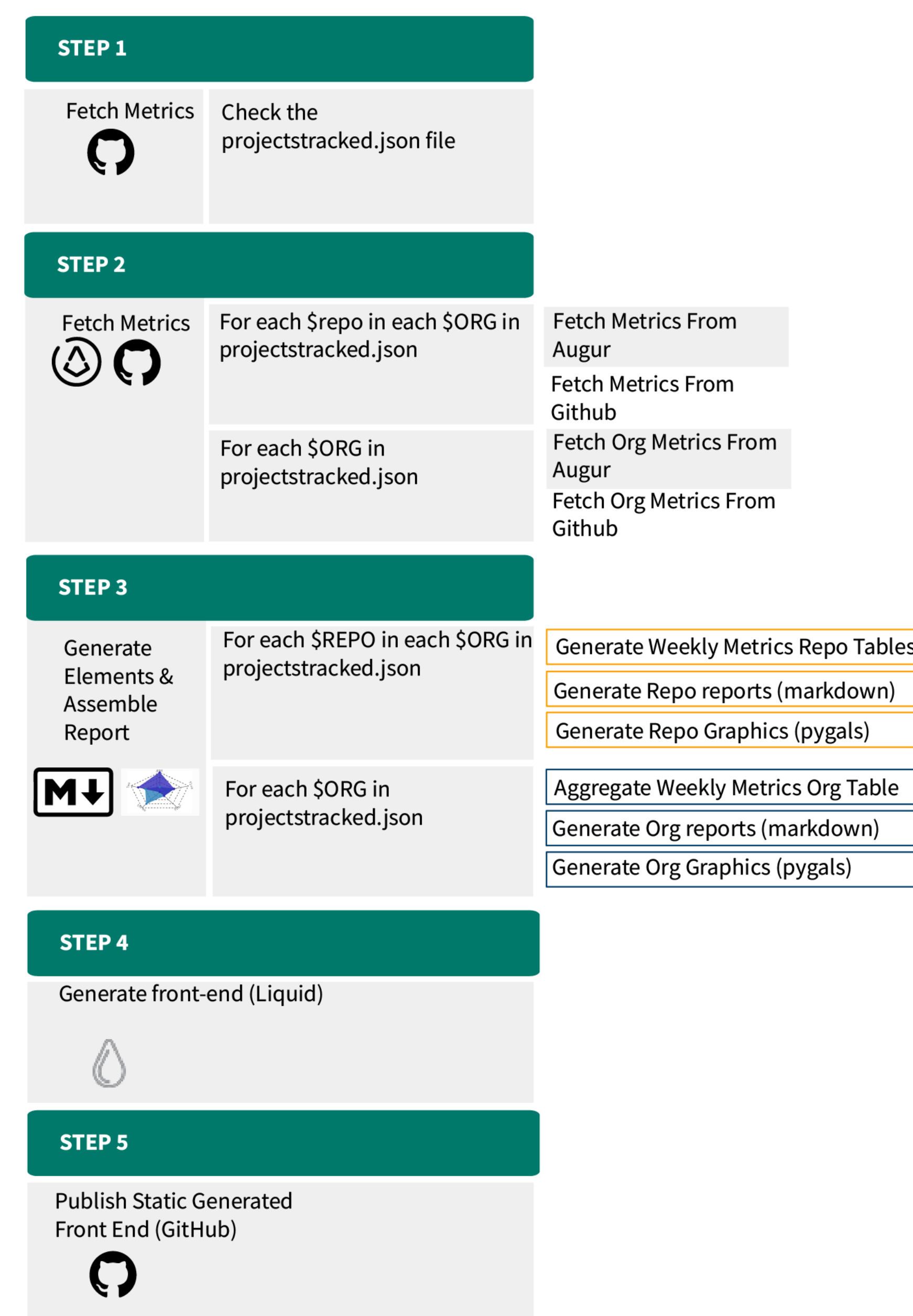
Repository Maturity Models help us standardize and categorize content and practices. This reduces duplicate work, reduce duplicate costs, reduce continuity risk, reduce security risk.



Repository Metrics

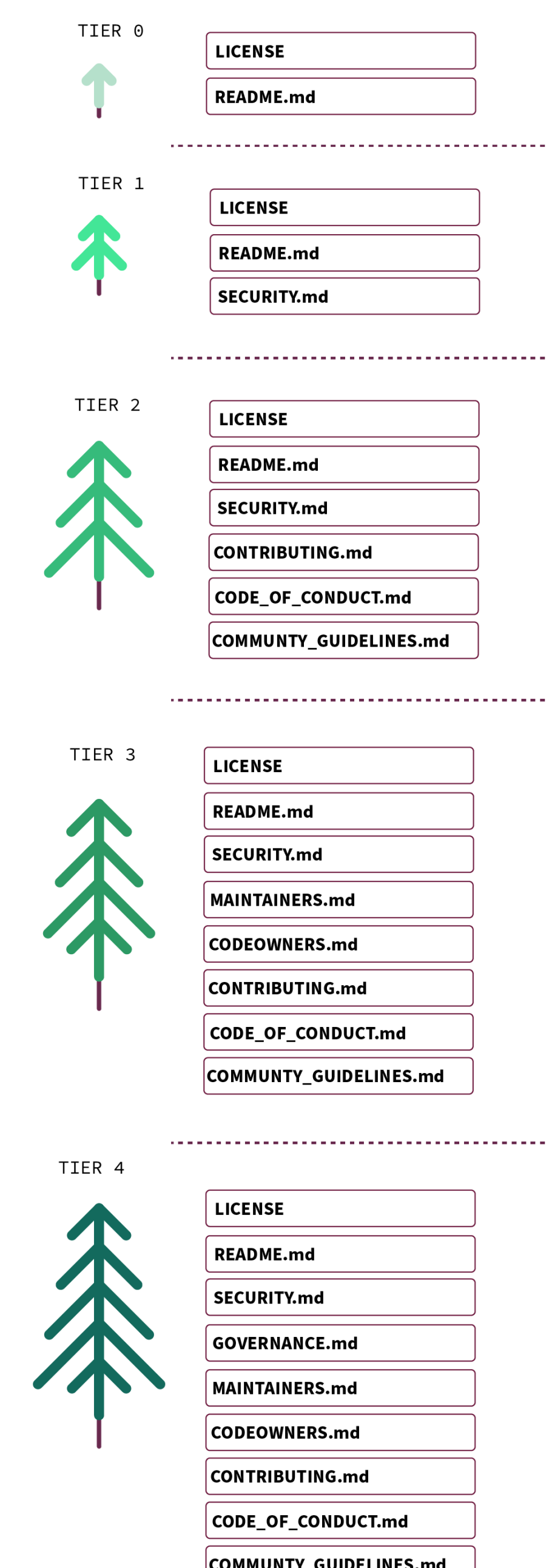
Repository Metrics help accountability for contract performance, engine for talent, reduce duplicate work, reduce duplicate costs, reduce continuity risk, reduce security risk

Automated tooling like cookiecutter, and Continuous Integration/Deployment workflows, help us scale these practices across our ecosystem that serves over 150 million users at the Centers for Medicare and Medicaid Services.



Determining the Maturity Tier

Repository Templates and Outbound Checklists help us establish a healthy starting point; this saves time, reduce duplicate work, reduce duplicate costs, reduce continuity risk, reduce security risk.



Outbound Review Process



How We Grow the Program

The Digital Service at the Centers for Medicare and Medicaid Services (CMS) is committed to growing open source through early career pipeline in the following ways:

- Digital Service at CMS** - Up to 4 year tour of duty for established professionals in Engineering, Product management, Design, and Data science GS-13+
- United States Digital Corps** - 2 year tour of duty for early-career technologists, eligible to convert to full-time, career positions in the competitive service at their agency. GS-9 to 12, + 50% recruitment Incentive.
- Civic Digital Fellowship at Coding it Forward** - Paid 10 week summer internship program for currently enrolled undergrad, grad, bootcamp students or recent graduates.
- Urban Alliance** - 6 month part-time to full-time Program that provides skills training, mentoring, and paid internships to high school seniors that keep them connected to school or the workforce.
- US Digital Response- Volunteer organization matching civic minded technologists with governments and non-profits via 8 week unpaid engagements.



<https://github.com/DSACMS/pycon-poster-2024>
opensource@cms.hhs.gov

