



Making Common Cause

Building a dispersed, collaborative, network of teams

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Let's talk
about
teams...

Characteristics of a team –

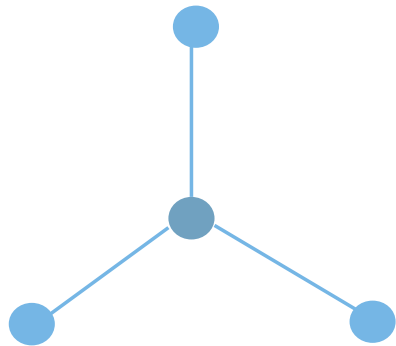
- Team members
- A goal/task/project
- Resources
- Timeline
- Metrics for success
- Ways of interacting with other teams (if needed)
- Ways of interacting with people interested in the task
- Strategies for communications, adaptation, and risk management

...still
talking
about
teams...

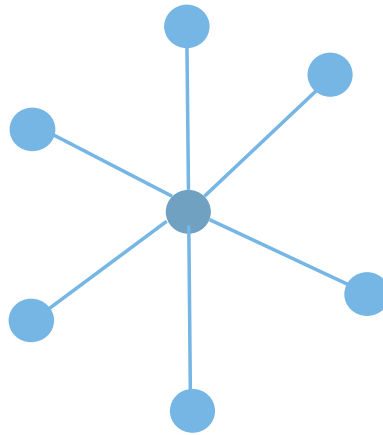
Characteristics of an effective team –

- Has a common goal
- Is driven by the primary end goal
 - Professional inter-personal dynamics
- Good intra-team communications
- Creative problem-solving
- Open-minded and flexible – can adapt when plans change
- Supportive and nurturing of team members
- Celebrates successes
- Learns from failures

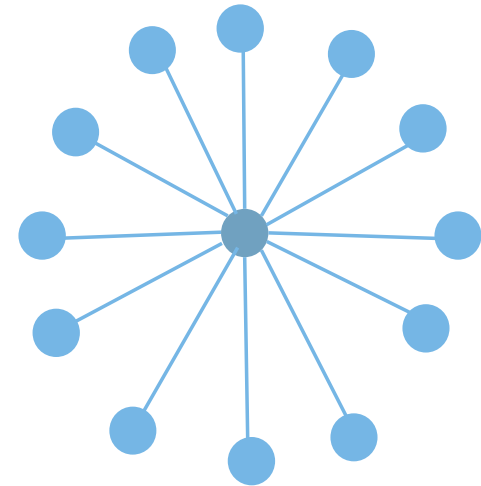
Team organization – “Star”



3 + 1 members



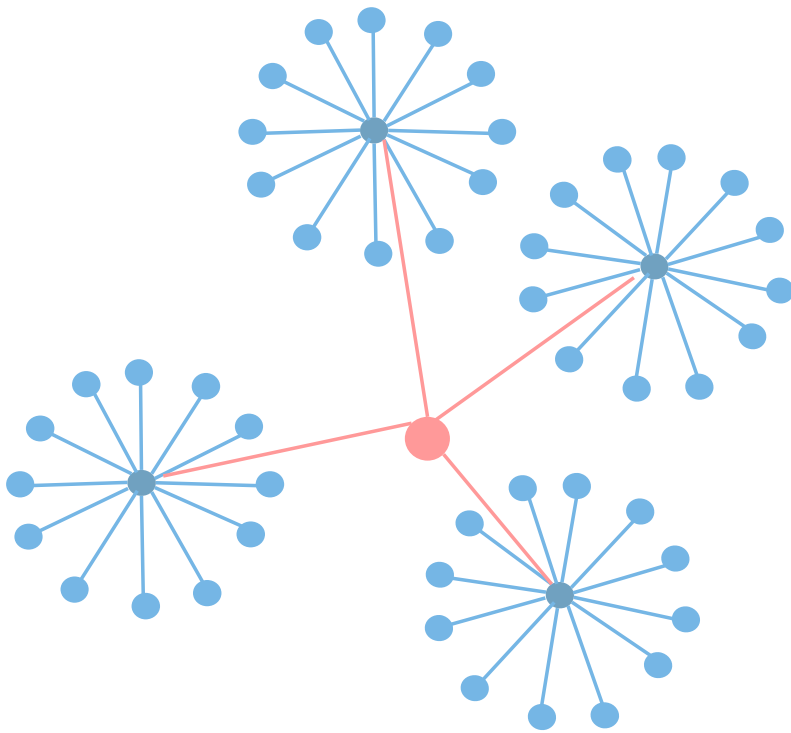
6 + 1 members



12 + 1 members

Team size limited only by person acting as coordinator/manager

Team organization – a network of stars

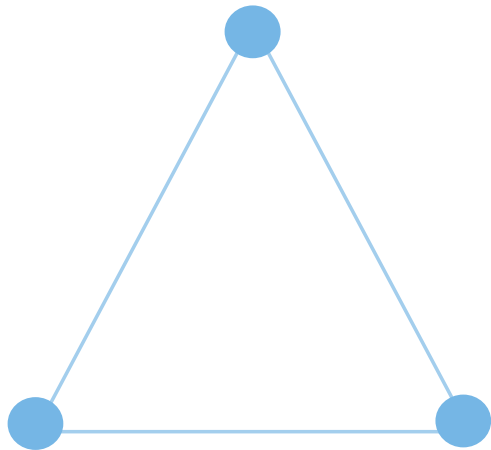


Communication in a network can be one-way top-to-bottom (hierarchical), one-way bottom-to-top (grassroots), or two-way (inclusive)

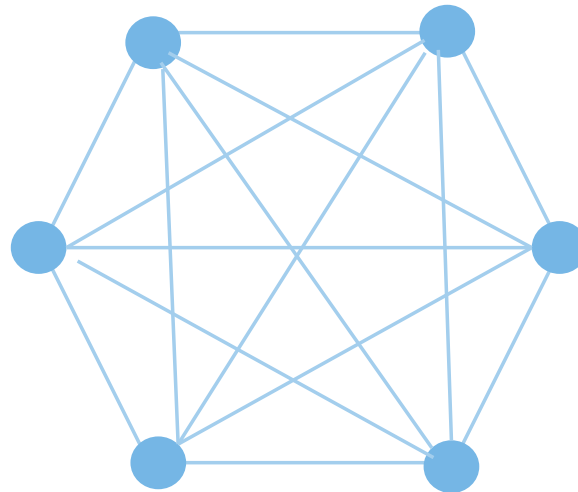
Pros and Cons of “star” teams

- + flexible team size
- + easier task coordination logistics
- + diverse domain expertise
- coordinator/manager has to be a “unicorn”
 - must be able to bridge domains
 - manage logistics
 - communications
 - personnel issues
- single point of failure
- +/- simple but weak mission alignment

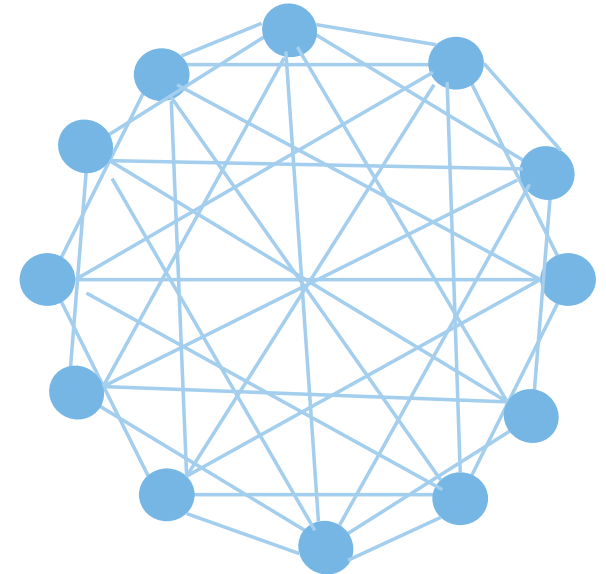
Team organization – “Peer”



3 members
3 links



6 members
15 links

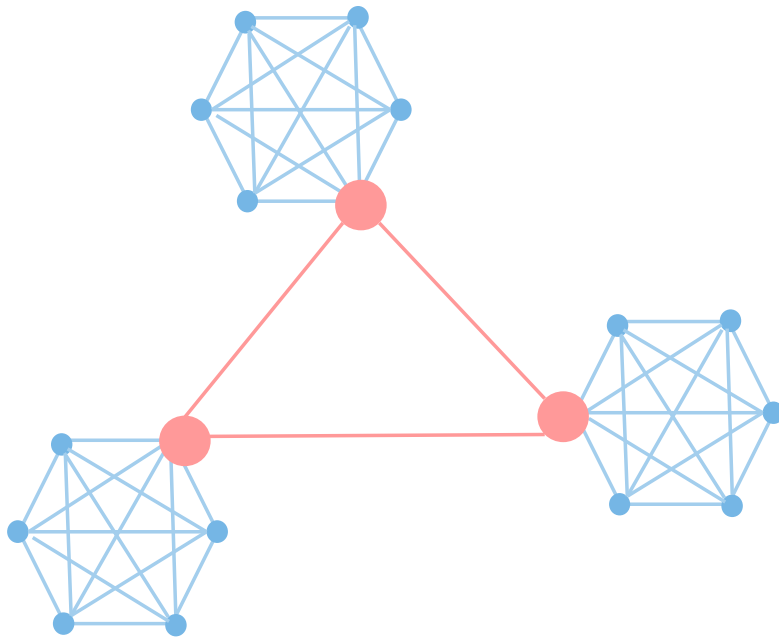


12 members
66 links

Number of within-team communication links (team of size n) = $n(n-1)/2$

[“Two pizzas” teams: The science behind Jeff Bezos’ rule](#)

Team organization – a network of peers



Communication in a network can be one-way top-to-bottom (hierarchical), one-way bottom-to-top (grassroots), or two-way (inclusive)

Pros and Cons of “peer” teams

- + agile & proactive
- + resilient – back-up and succession
- + effective multi-disciplinary approach
- small team size
- challenge developing a team culture
 - work styles
 - bridge expertise/vocabulary
 - intra-team communications
 - task assignments & tracking
- +/- complex but strong mission alignment

A network of teams is essential!

A network of teams can:

- Communicate
- Collaborate

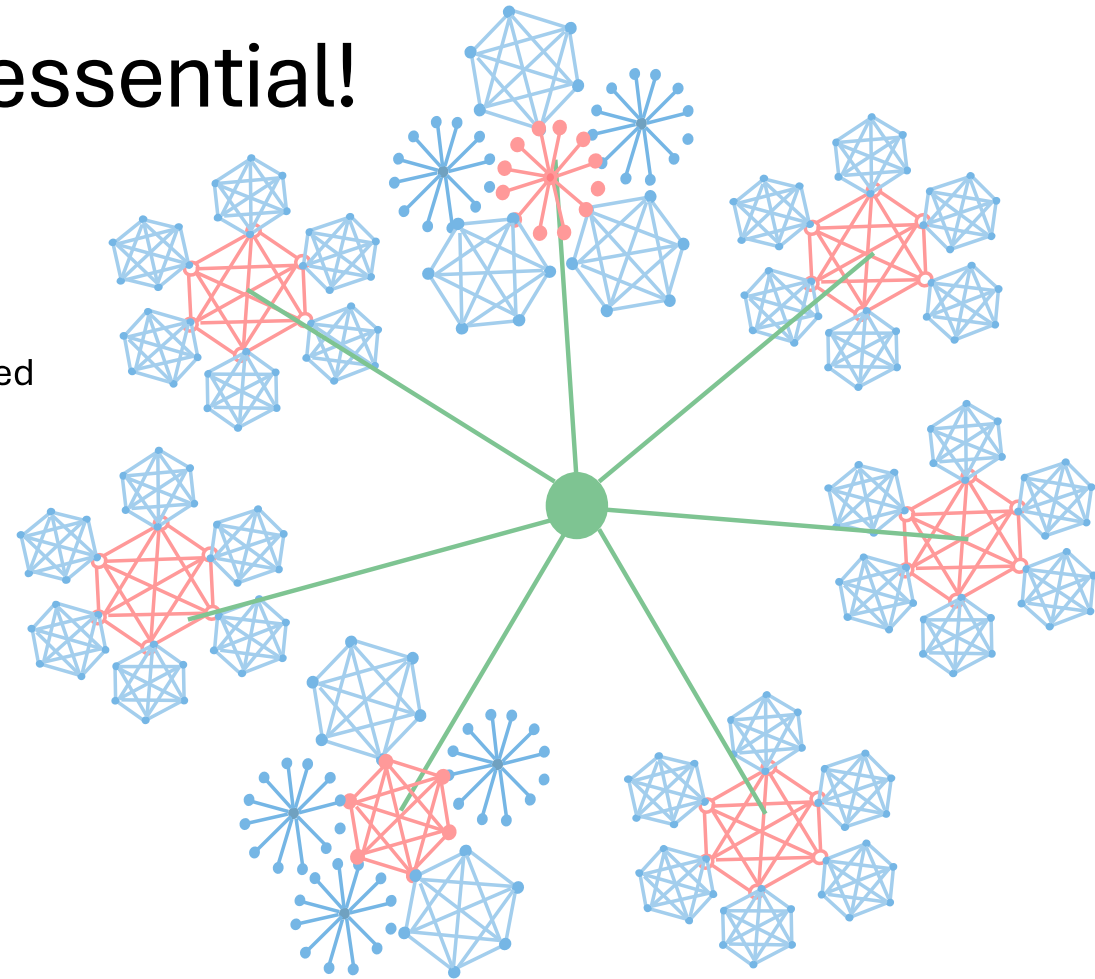
And bring geographically and/or temporally dispersed teams together

Setting up an effective network of teams requires assessing:

- communication load
- resilience
- weak vs. strong alignment

Empowering a network of teams requires investing in:

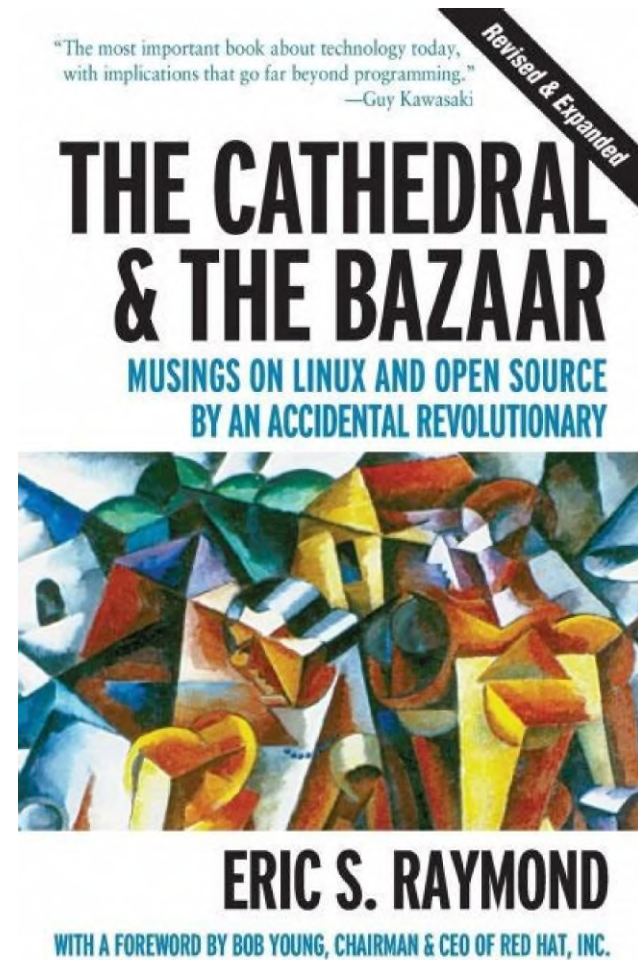
- people
- process
- technology

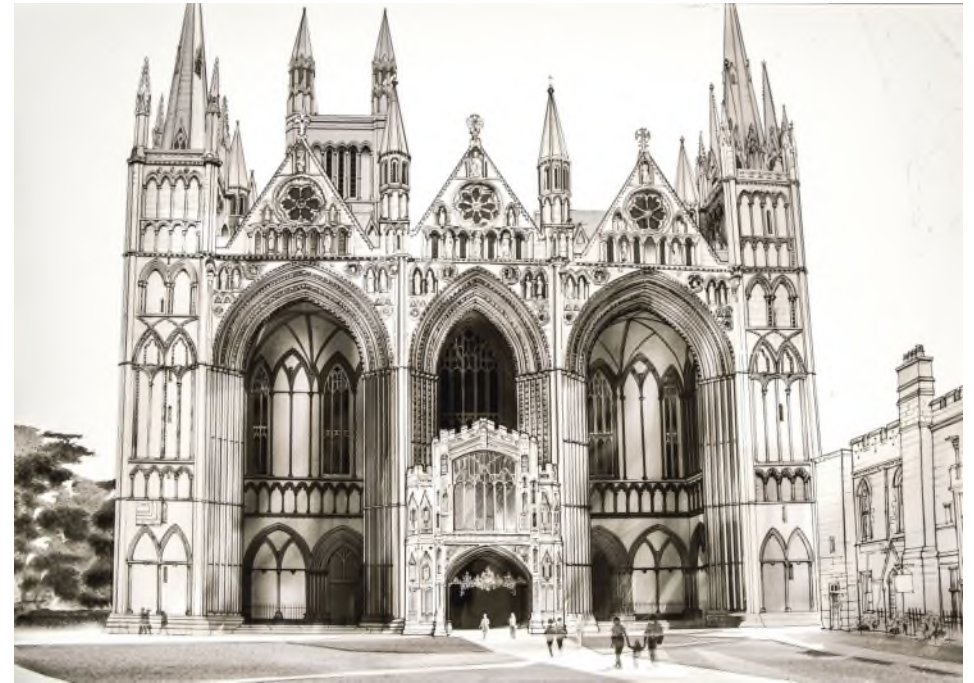
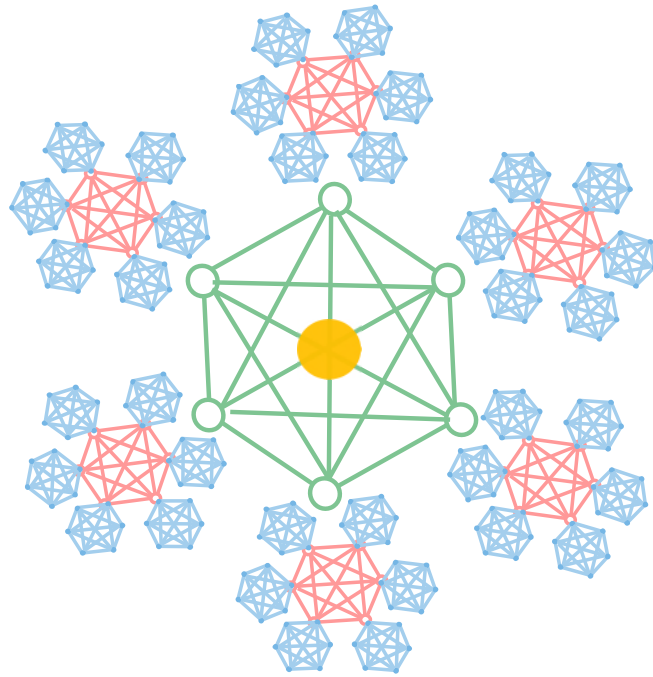


Real life is hybrid!

A digression into tech history...

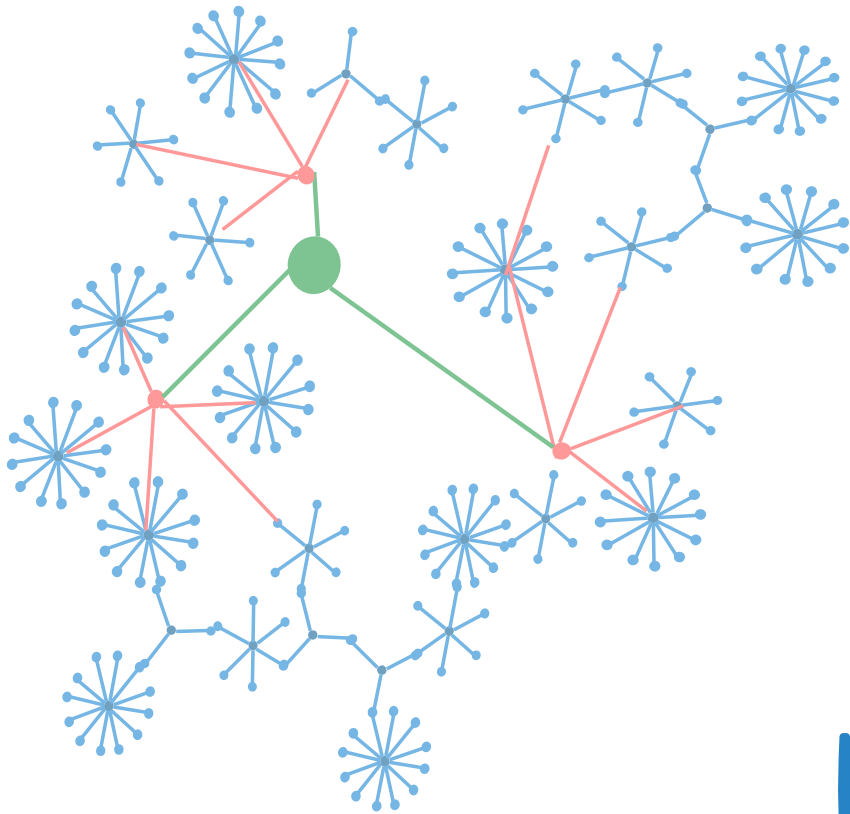
- The Cathedral & the Bazaar
 - [Essay in 1997](#)
 - [Book in 1999](#)
- Compared two different ways of organizing to develop operating systems:
 - Traditional tightly integrated “expert” teams
 - Loose collaboration amongst dispersed self-identified members





The Cathedral

- Small, tightly-knit “expert team
- Structured, hierarchical, network
- Centralized control of resources and decision-making
- Built to last, i.e., not responsive to every change request
- Strong mission-alignment



The Bazaar



- Loosely grouped, diverse, teams and individuals
- Dispersed network, information flow may be uneven
- Decentralized resources and decision-making
- Highly responsive
- Weak mission-alignment

Lessons for bazaar projects

Adapted from “The Cathedral and the Bazaar”

- You will not get it right the first time...learn and adapt!
- The “bazaar” will continue after you...make sure to hand off your work to a competent successor.
- Listen to the people you serve...often!
- Treating constituents as collaborators leads to rapid and effective problem solving.
- Given a large enough base of collaborators, the fix to almost every problem will be obvious to someone.
- Focus on effective data and data structures, algorithms can be reinvented.
- It takes an effective communications medium and an effective coordinator to harness the wisdom of the network.

Values

- Open-minded
- Long-term focused
- Collaborative
- Inclusive
- Humble
- Informed
- Leverage technology!

“Lessons” for open source projects

The Cathedral and the Bazaar

1. Every good work of software starts by scratching a developer's personal itch.
2. Good programmers know what to write. Great ones know what to rewrite (and reuse).
3. Plan to throw one [version] away; you will, anyhow (copied from Frederick Brooks's *The Mythical Man-Month*).
4. If you have the right attitude, interesting problems will find you.
5. When you lose interest in a program, your last duty to it is to hand it off to a competent successor.
6. Treating your users as co-developers is your least-hassle route to rapid code improvement and effective debugging.
7. *Release early. Release often.* And listen to your customers.
8. Given a large enough beta-tester and co-developer base, almost every problem will be characterized quickly and the fix obvious to someone.
9. Smart data structures and dumb code works a lot better than the other way around.
10. If you treat your beta-testers as if they're your most valuable resource, they will respond by becoming your most valuable resource.

“Lessons” for open source projects...contd

The Cathedral and the Bazaar

11. The next best thing to having good ideas is recognizing good ideas from your users. Sometimes the latter is better.
12. Often, the most striking and innovative solutions come from realizing that your concept of the problem was wrong.
13. Perfection (in design) is achieved not when there is nothing more to add, but rather when there is nothing more to take away. (Attributed to [Antoine de Saint-Exupéry](#))
14. Any tool should be useful in the expected way, but a truly great tool lends itself to uses you never expected.
15. When writing gateway software of any kind, take pains to disturb the data stream as little as possible—and never throw away information unless the recipient forces you to!
16. When your [configuration] language is nowhere near [Turing-complete](#), [syntactic sugar](#) can be your friend.
17. A security system is only as secure as its secret. Beware of pseudo-secrets.
18. To solve an interesting problem, start by finding a problem that is interesting to you.
19. Provided the development coordinator has a communications medium at least as good as the Internet, and knows how to lead without coercion, many heads are inevitably better than one.

Wikipedia – a bazaar project example

- **Open** – any one can contribute.
- **Transparent** – change history is available.
- **Self-organizing** – individual/teams decide when & how they want to contribute.
- **Collaboration** across space and time.
- **Dispersed** across space and time.
- **Weak mission alignment** – common goal is to contribute to the archive of human knowledge, but there is no detailed plan or timeline.



[History of Wikipedia](#)

*Returning
from our
digression*

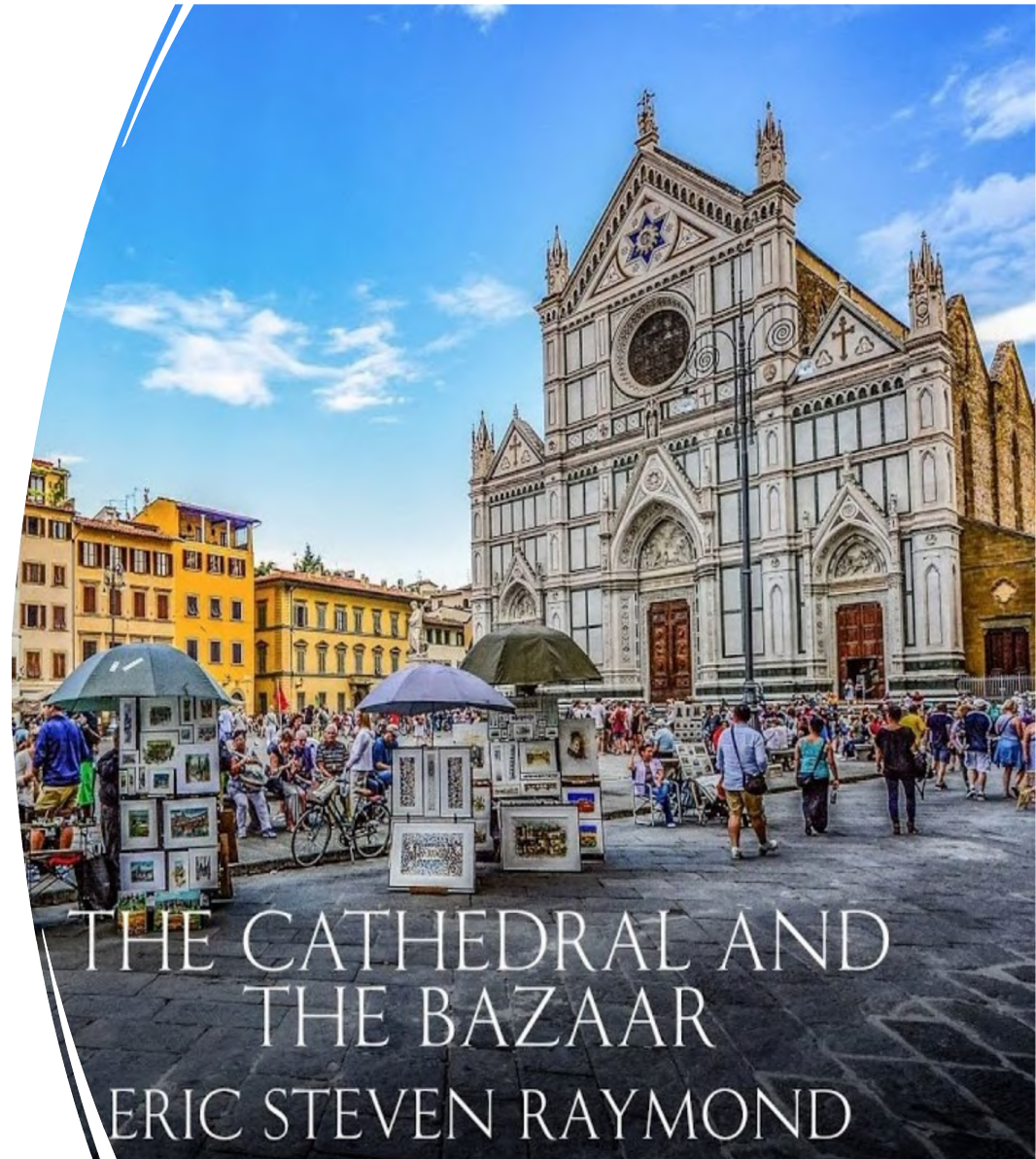
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Questions! Questions! Questions!

- How do we organize teams?
 - When to use the “star” vs. “peer” team – or some – other team organization?
- How do we recognize the network we need?
 - Cathedral or bazaar?
- How do we build an effective network?
 - How do we create a cathedral or bazaar?

The Cathedral or the Bazaar?

- Resources
- Scope
 - Time
 - Impact
- Mission
 - Weak mission alignment
 - Strong mission alignment
- Adaptability



THE CATHEDRAL AND
THE BAZAAR
ERIC STEVEN RAYMOND

Creating a Bazaar

Bringing people together for a common cause

So, we have...

- A compelling vision but nebulous goals
- Few resources compared to the scope of the vision
- The scope is huge – impacts a significant fraction of our community



Making Common Cause

- Find the people in the community who believe in the cause/vision
- Set up spaces for communications, sharing, and collaboration
- Establish norms and infrastructure for collaboration
 - Remember collaborators may be geographically and temporally dispersed
- Establish goals – a vision is inspirational not actionable
- Build in accountability and transparency
- Create a resilient network
 - Not dependent on a single individual/team or technology

Finding the people

Making Common Cause

- Mine your network
- Expand your network
 - Email/call friends of friends
 - Cold call
- Go where people you want to make common cause with would go
 - Talks, Conferences, Classrooms, other events...
- Harness the networks of the emerging team
- Keep the momentum going
 - Meet & greets (virtual or in-person)
 - Reading & discussion groups
 - Speaker series
 - Debates
 - Other events...hackathons, trivia nights, design challenges....

Setting up Collaborative Forums

Making Common Cause

- Harness technology!
 - Leverage collaboration tools such as Teams, Zoom, Slack, Web, Forms/Surveys, Doodle, Menti....
- Set up forums to promote collaboration, avoid frustration or friction
 - Make resources FAIR – findable, accessible, interoperable and reusable
 - Ensure norms of collaboration are well-understood by everyone in the network
 - Use moderators or facilitators for potentially fractious topics

Establishing Norms for Collaboration

Making Common Cause

- Collectively agree on rules of collaboration
 - Review and update guideline periodically
- Remember collaboration is across space and time
 - Leverage technology to enable input from spatially and temporally dispersed teams
 - Document, document, document!
 - Have clear hand-off and close-out procedures
- Use moderators or facilitators for more fractious areas
- Develop working relationships
 - Reading or discussion groups
 - Events – hackathons, workshops, conferences...
- Celebrate the team!

Establishing Goals Making Common Cause

Remember – a vision is not actionable!

- Set and track goals collaboratively
 - Align goals with the common cause
 - Ensure goals meet the diverse needs of the network
 - Review and update goals every 1-5 years
- Track progress
 - Have a visible indicator to show progress on goals
- Celebrate accomplishments
 - Celebrations create a sense of accomplishment
 - Provide recognition of the work
 - Provide inspiration to undertake new projects

Being Accountable & Transparent

Making Common Cause

- Leverage technology for tracking change
 - Track decision-making
 - Changes to network guidelines and policies – version control
- Leverage technology for dissemination of decision-making spatially and temporally spread-out teams
 - Accessible repositories
 - Document, document, document!
- Invite feedback and constructive criticism
- Periodically assess alignment with vision

Creating resilience

Making Common Cause

- Focus on the people
 - Develop skills, keep skills updated
 - Have mentoring opportunities
 - Develop a pipeline through outreach and service
- Focus on the work
 - Use technology for security & back-up of intellectual property
 - Have succession and back-up plans for critical goals
 - Document, document, document!
- Focus on adaptability
 - Keep up with the latest research, trends, and technology



Image from "The Pragmatic Programmer"

Some personal ruminations...

- State Government, and governments in general, need all of the above –
 - Star and peer teams and networks
 - Cathedrals and bazaars
- Governments have to leverage new organizational strategies – coupled with modern technology – to fulfil their mission
- Cathedrals and Bazaars are not exclusive
 - Cathedral networks can spin off bazaar teams and vice versa
 - Look at Europe – market towns have cathedrals, cathedrals towns have markets
 - A thriving city needs both a cathedral and a bazaar

I would love to hear your thoughts and stories

Of peers and stars
And building cathedrals and bazaars

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If you want to see *making common cause* in action –
Email me and I will add you to the invitee list for the
2025 Data Equity Summit listening sessions

