

# Organization Design of the Digital Preservation Network

Authored by Sandy Payette, on behalf of the DPN Executive Team, June 2014

## 1. DPN Transitional Organization

In March 2014, DPN leadership designed a transitional leadership structure to evaluate the needs of DPN at this stage and to make recommendations for building out the next stage of the DPN organization. An Interim Executive Team was established that consisted of a Chief Strategist and Evangelist (James Hilton, representing the DPN Board), a Chief Business Officer (Steve Morales) and a Chief Technology Officer (Sandy Payette, on contract as a strategic consultant for three months). This experimental organizational structure was created to bring together three leaders with a complementary set of skills and deep expertise in areas essential to DPN – especially issues of university strategy, business models, and emergent technology. The Interim Executive Team is answerable to the DPN Board of Directors and does its work for the benefit of the DPN membership. Over the past 3 months, James, Steve, and Sandy have focused on DPN business strategy and new models for the DPN organization while it continues to operate administratively under the umbrella of Internet2. They have also worked closely with the distributed DPN technology team to map a path from DPN as a technology integration, to DPN as an emergent infrastructure, to DPN as future production service that is provided “by the Academy and for the Academy.” This document reports on the results of the strategic work led by the Interim Executive Team and proposes a functional design for the next stage of the DPN organization to support the emergence of DPN’s preservation infrastructure.

Moving forward in the near term, the Executive Team model will continue into the next stage of the DPN organization. James Hilton and Steve Morales will continue in their leadership roles, with James providing overall strategy and a direct connection to the DPN Board, and Steve providing leadership in the business development and strategic alliances functional areas of DPN. The role that was initially identified as Interim Chief Technology Officer, and temporarily filled by Sandy Payette, will now be fulfilled by two Technology Co-Chairs, David Minor and Cory Snavelly, who were selected from the extended DPN technology team. Effective July 2014, Sandy will move into an advisory role with DPN leadership in areas of overall strategy and technical evolution while she continues to work on her PhD and related grant-funded research projects.

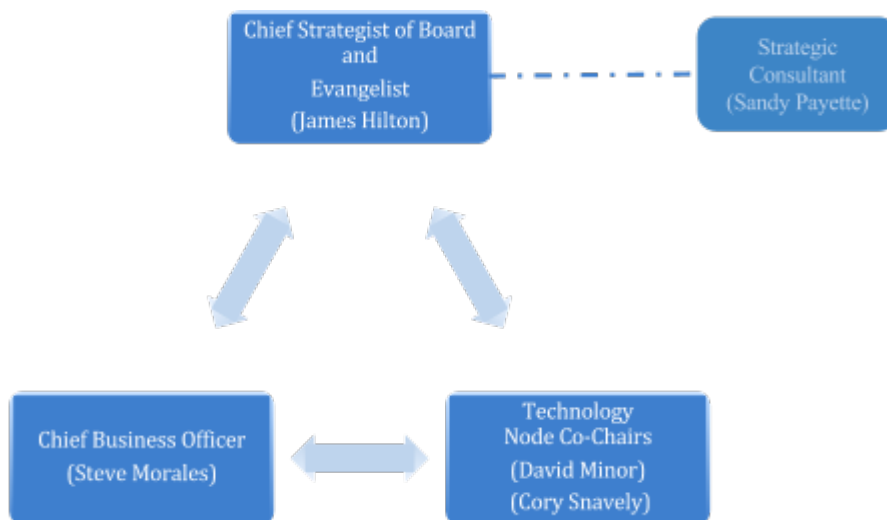


Figure 1: Proposed DPN Executive Team (July 2014)

To maximize progress towards making DPN a production service, the Executive Team is recommending to the Board that DPN immediately focus on recruiting and hiring for two essential management level positions. One of these positions, the *Services Manager*, will have primary responsibility for interfacing with the DPN membership, addressing all process and policy issues on the pathway towards unveiling DPN as a production service. The other new position, the *Technology Manager*, will have a primary responsibility for coordinating the distributed DPN Node teams to ensure that DPN - *as a whole network* - becomes an essential preservation infrastructure that is robust, reliable, and resilient. This process will initially involve coordinated testing to respond to a set of scenarios that exercise the DPN network under many different conditions. Operationally, this role is essential to demonstrating how the DPN network will adapt and scale to fulfill the DPN vision and achieve its long term production goals. These two new positions will report to the proposed Executive Team.

## 2. Longer Term - Evolution of the DPN Emergent Organization

As DPN matures it will evolve towards a new organizational structure designed around essential functional areas. Key assumptions are that minimal hierarchy and maximum flexibility is best for DPN during its growth stage (see Figure 2). In the new organizational model, employees will operate in an entrepreneurial manner, leveraging expertise across the different functional areas to rapidly move towards key milestones that are articulated in the DPN master roadmap.

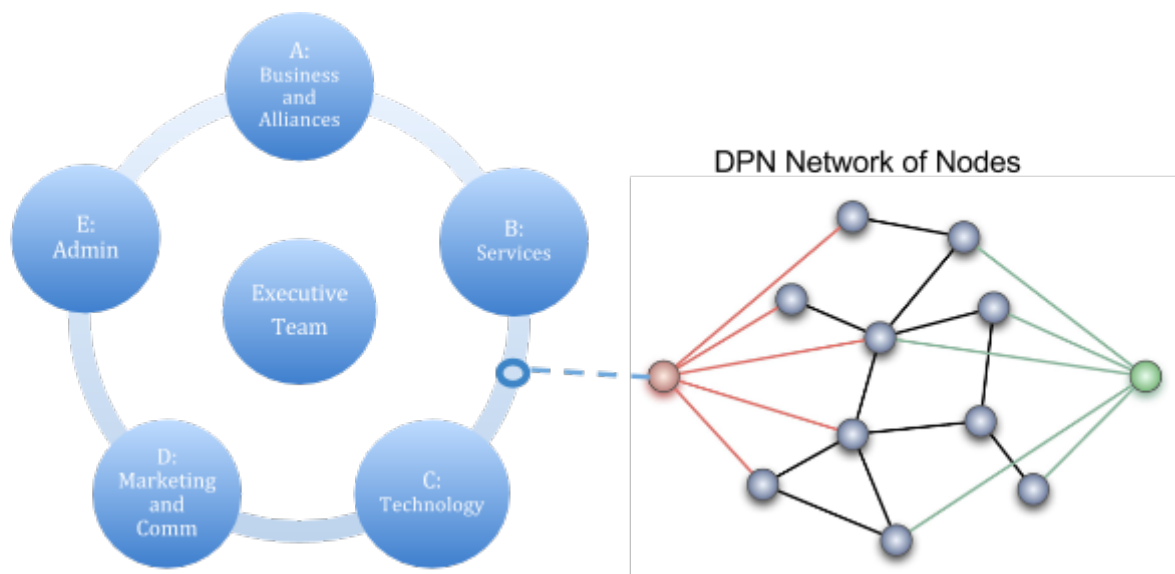
There are five broad functional areas that will be required in the DPN organization to achieve the goals of the next year and beyond. Initially, we envision one full-time person fulfilling a role in each area, but over time there could be multiple people working in a particular functional area. The emerging DPN organization will have employees who fulfill the following functions:

- A. **Business Development and Strategic Alliances:** Leadership in the business aspects of the DPN enterprise. This includes strategic analysis, financial forecasting and business model design and implementation. Over time, the focus will include the development of new business opportunities, as well as strategic partnerships and alliances with other institutions that align with the DPN mission.
- B. **Services:** Leadership in the definition and deployment of DPN services based on the organization's core principles. This includes gathering product and market requirements and positioning DPN relative to other repository, storage and preservation solutions. A key part of the services function is brokering relationships between DPN service nodes and DPN member organizations, which also requires attention to legal agreements and business contracts for DPN services.
- C. **Technology:** Leadership for technical development of DPN as infrastructure. Initially this requires robust testing of the integration of DPN nodes with regard to both core DPN services and adjacent services. This process requires coordination of distributed DPN technology teams and a process for project management in a heterogeneous, multi-institutional environment.
- D. **Marketing and Communication:** Communication to a wide constituency is a vital functional role for DPN as it further develops. One of the first tasks should be to develop an overall communication strategy for the DPN organization. Specific areas of focus are messaging, branding, marketing, and dissemination of information to current and future members. This function is the hub of responsibility for managing the Web presence, media, events, and education.
- E. **Administration:** Execution of the administrative processes that ensure effective operations for financial, human resources, and general support of a non-profit organization. As an incubated project under Internet2, DPN leadership negotiates with the home organization on the specifics of how these services will be provided.

During this stage, the business development and strategic alliances function will continue to be led by Steve Morales in his role of Chief Business Officer. In June 2014, DPN will begin recruiting for the two new positions of Services Manager and Technology Manager. The intention is to fill both roles as soon as possible, since they are essential for taking DPN from its

current state of development to the first version of a DPN production service. The marketing and communication functional area is viewed as essential to DPN as it gets closer to providing a production service. We anticipate recruiting for this role in the course of the next year. Regarding the administrative area, DPN will depend upon business functions provided by Internet2 which will continue to serve as the 501(c)(3) not-for-profit home for DPN. The particulars of the role that Internet2 will play are under negotiation at this time, specifically the process of managing the chart of accounts for DPN financials, the legal support framework for DPN, and the administration of human resources functions such as hiring, payroll, and benefits. As depicted in Figure 2 the maturing DPN organization is envisioned to be non-hierarchical and designed to ensure that information flows laterally across all functional areas. The Executive team provides overall strategic direction to all functional areas.

**Figure 2: DPN Mature Functional Organization – Core Leadership Team with Extended Node Managers Council**



In addition to the core DPN functional areas, the broader DPN effort will continue to be supported by collaborators who are employed by institutions that have committed to providing DPN Node services. Initially, five institutions will provide DPN Node services by drawing upon the expertise of employees who specialize in particular technical and policy areas that are required to enable DPN core and adjacent services. Over time, it is expected that new service nodes will be added and some nodes will be removed from the DPN network. The DPN core organization will ensure a smooth process for the certification of new nodes and for the succession of content in the event that an existing node is decommissioned. From an operations standpoint, the Executive Team has endorsed the formation of the DPN Node Managers Council that will have one representative from each node who has authority to make decisions regarding the technical and operational aspects of DPN Node services (see Figure 3).

**Figure 3: Node Managers Council (One representative for each DPN Node Team)**



The Node Managers will define technical specifications for core DPN Node services as well as interfaces and protocols that enable connectivity of the whole DPN distributed architecture. Node Managers will collaborate with the new DPN Technology Manager to ensure the formulation and implementation of test plans for the 2014 DPN Pilot, leading to Node operations becoming a production service according to agreed timeframes. Once DPN is a production operation, Node Managers will work with DPN’s Technology Manager and Services Manager to ensure that their respective Nodes comply with DPN’s minimal service threshold for throughput, fixity, security, and reporting.

One (or two) Node Managers will serve as the Technology Chair (or Co-Chairs) on the DPN Executive Team. Thus, the Node Managers Council will have representation on the Executive Team by means of the Technology Chair (or Co-Chairs). Going forward, Node Managers Council will be responsible for nominating individuals to serve as the future Technology Chair (or Co-Chairs) on the Executive Team.

Overall, as DPN matures, it will operate as a hybrid virtual organization, with core employees of DPN who provide essential organizational functions, along with a network of extended collaborators from multiple institutions providing DPN Node services. Table 1 shows the current listing of all DPN employees and the extended network of collaborators.

**Table 1: DPN Employees and Extended Collaborators**

Person	Role Title	DPN Functional Area	DPN Node
James Hilton	Chief Strategy Officer & Evangelist	DPN Executive Team	
Steve Morales	Chief Business Officer	DPN Executive Team	
Sandy Payette	Strategic Consultant	DPN Executive Team	
TBD, June posting	Services Manager	DPN Core Leadership Team	
TBD, June posting	Technology Manager	DPN Core Leadership Team	
TBD	Marketing &	DPN Core Leadership	

	Communication Mgr.	Team	
Internet2	Various roles	DPN Core Admin (ad hoc)	
David Minor	DPN Tech Co-Lead Node Manager	Node Managers Council	Chronopolis (UCSD)
Cory Snavelly	DPN Tech Co-Lead Node Manager	Node Managers Council	HathiTrust (UMich)
Tom Cramer	Node Manager	Node Managers Council	SDR (Stanford)
Ladd Hanson	Node Manager	Node Managers Council	TPN (Texas)
Scott Turnbull	Node Manager	Node Managers Council	APTrust (UVa)
Bill Brannan	Developer	Extended Tech Team	Chronopolis (DuraCloud)
Dan Galewsky	Developer	Extended Tech Team	TPN (Texas)
Bryan Hockey	Developer	Extended Tech Team	HathiTrust (UMich)
Chris Jordon	Developer	Extended Tech Team	TPN (Texas)
Sebastien Korner	Developer	Extended Tech Team	HathiTrust (UMich)
Rosalyn Metz	Operations Manager	Extended Tech Team	SDR (Stanford)
Mike Ritter	Developer	Extended Tech Team	Chronopolis (UMD)
James Simon	Developer	Extended Tech Team	SDR (Stanford)