



Q

Home ► All Journals ► Engineering & Technology ► Structure and Infrastructure Engineering ► List of Issues ► Volume 1, Issue 4 ► Tending the infrastructure commons: Ensu

Structure and Infrastructure Engineering >

Maintenance, Management, Life-Cycle Design and Performance

Volume 1, 2005 - Issue 4

414190ViewsCrossRef citations to dateAltmetric

Original Articles

Tending the infrastructure commons: Ensuring the sustainability of our vital public systems

R. G. Little

Pages 263-270 | Received 17 Dec 2004, Accepted 01 Mar 2005, Published online: 16 Feb 2007



Abstract

It is by now well recognized that civil infrastructure systems are essential in providing the range of services generally considered necessary to support a nation's economic well-being and quality of life. Consequently, it is of the utmost importance to government, business, and the general populace that these services are sustained over the long term by periodic replenishment of the physical systems that deliver them. This has proven challenging for several reasons. First, civil infrastructures do not all lie within the public domain. Second, infrastructures are complex systems that are vulnerable to failures or service degradations in other systems because of their interconnected and interdependent natures. Third, despite the obvious importance of reliable and resilient systems to our collective social, economic, and political well-being, it has been difficult to fund the necessary maintenance and capital improvements. Deciding what levels of reliability should be provided and who should pay for it are not simple questions to be addressed solely by service providers, customers, or government regulators. This paper will present the concept of an infrastructure commons and recommend some initial actions that the federal government could take to ensure that the national 'public good' aspect of civil is preserved and enhanced. These actions include the beginning of an informed and serious dialogue between the public and private sectors, building coalitions for action among stakeholders in the governance process, and exploring alternative mechanisms for ensuring dependable and sustainable resource streams.

Keywords:

Sustainable infrastructure Supply chains

Infrastructure commons

Acknowledgement

Preparation and presentation of this paper was partially supported by the National Science Foundation under Grant No. CMS-0408577. This support is gratefully acknowledged.

Notes

First published online 22 August 2005

Additional information

Notes on contributors

R. G. Little First published online 22 August 2005 Related research 1

_				
Peop	P	al	SO	read
i cop	· C	-	50	.cuu

Recommended articles

Open access

Open journals

Dove Medical Press

Help and information

F1000Research

Help and contact

Newsroom

All journals

Books

Open Select

Overview

Cited by 19

Information for

Authors R&D professionals Editors

Librarians

Societies

Opportunities

Reprints and e-prints

Advertising solutions

Accelerated publication

Corporate access solutions

Keep up to date

Register to receive personalised research and resources by email

Sign me up





Copyright © 2025 Informa UK Limited Privacy policy Cookies Terms & conditions

Accessibility

Registered in England & Wales No. 01072954 5 Howick Place | London | SW1P 1WG

