

3 Pillars for Sustainable Management of Infrastructure

A new focus on infrastructure

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IPWEA is a community of public works professionals



Institute of Public Works Engineering Australasia (IPWEA)

- 4,000+ members
(engineers, finance & technical)
- 20,000+ in network
- International reputation in IAM
 - national rollout of AM & FP

Globally our community infrastructure is under strain



You have responsibility to manage
nation's roads & highways



Insufficient resources are provided to sustainably manage infrastructure



Quality services from infrastructure are critical for our economies



Economic development



Social & Recreation Needs



Public health & safety



Highly interdependent



Timeline

- 1993 • IPWEA 1st AM Committee
- 1994 • Accrual Accounting
- 1999 • 1st Infrastructure Report Card
- 2000 • International Infrastructure Mgmt Manual
- 2006 • National LG Study: strong recommendations
- 2008 • SA Regulated LTFP & AM Plans
- 2011 • LG Reform Fund \$25m
- 2014 • ISO 55000 Series

3 pillars for sustainable management of community infrastructure



Stewardship

Understanding
our
stewardship
responsibilities

Asset Management

Managing
existing as
well as new

Financial Planning

An essential
part of business

Stewardship.

Understanding our stewardship
responsibilities.

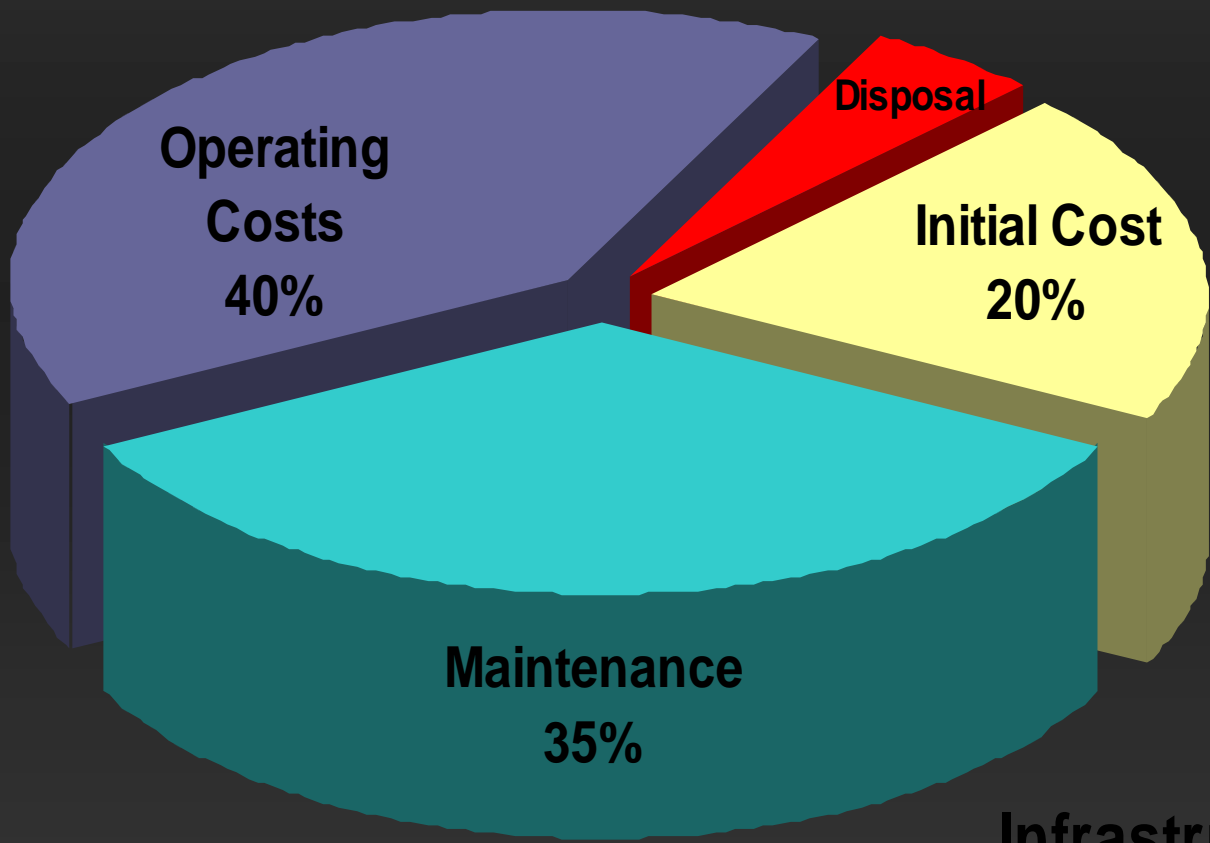


A close-up photograph of a young child's face, focusing on the eye and curly hair. The child has light-colored eyes and dark, curly hair. The background is a soft, out-of-focus green, suggesting an outdoor setting. The text is overlaid on the right side of the image.

Decaying
infrastructure
leaves a
liability for
future
generations

Infrastructure is long lived & needs to
be managed accordingly

Provide elected members with full costs, options & priorities



Infrastructure Assets
Typical Life Costs

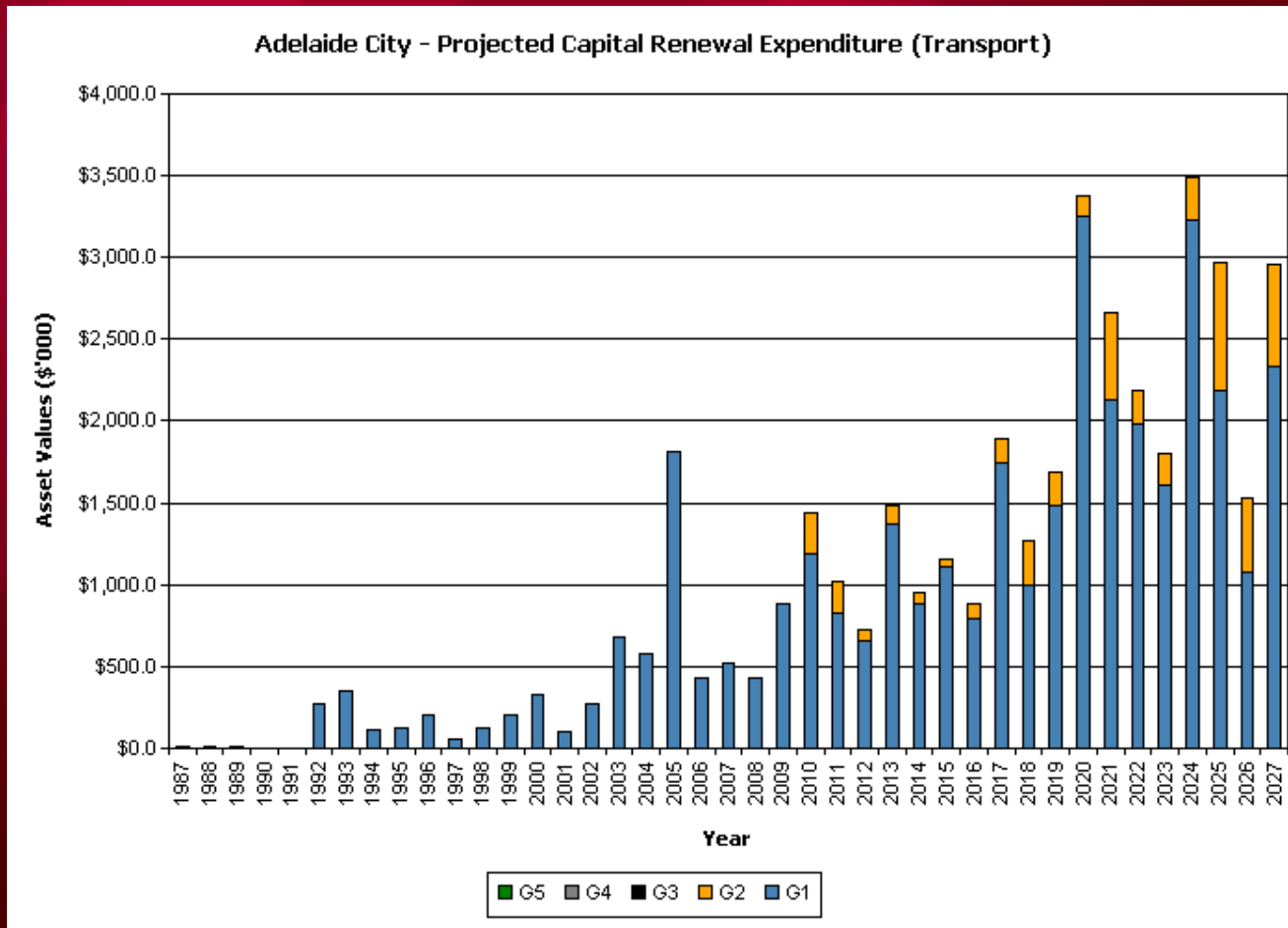
Infrastructure is
long lived & needs
to be managed
accordingly

\$1 spent early
saves \$5 if
deferred to later

Infrastructure is
long lived & needs
to be managed
accordingly

Be aware if the
wall of
expenditure
ahead

Project capital renewal requirements



Stewardship needs to be communicated to elected members



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Asset Management.

*To meet a required level of service,
in most cost effective manner, for
present & future generations*

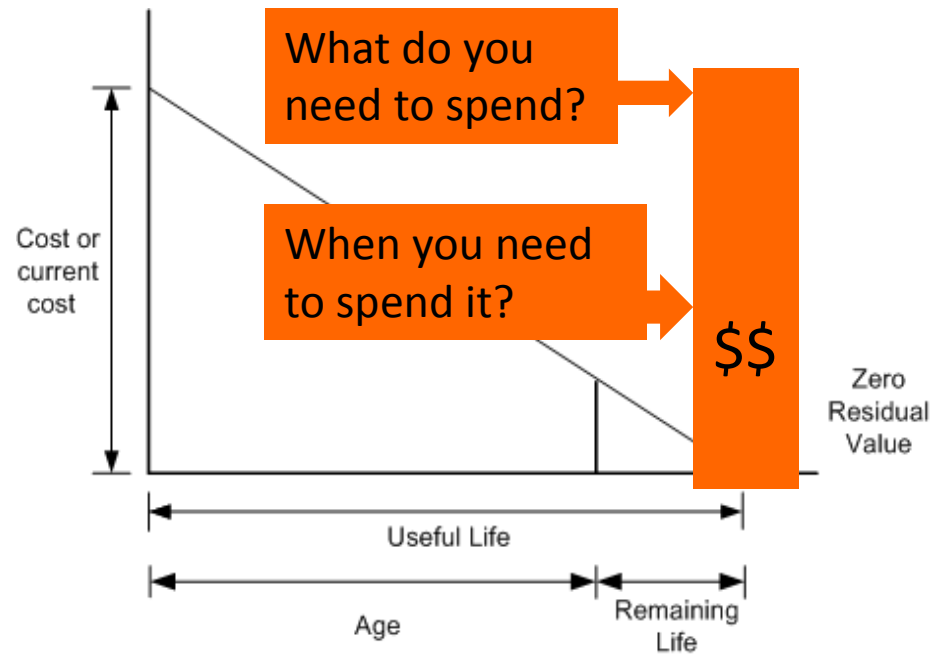
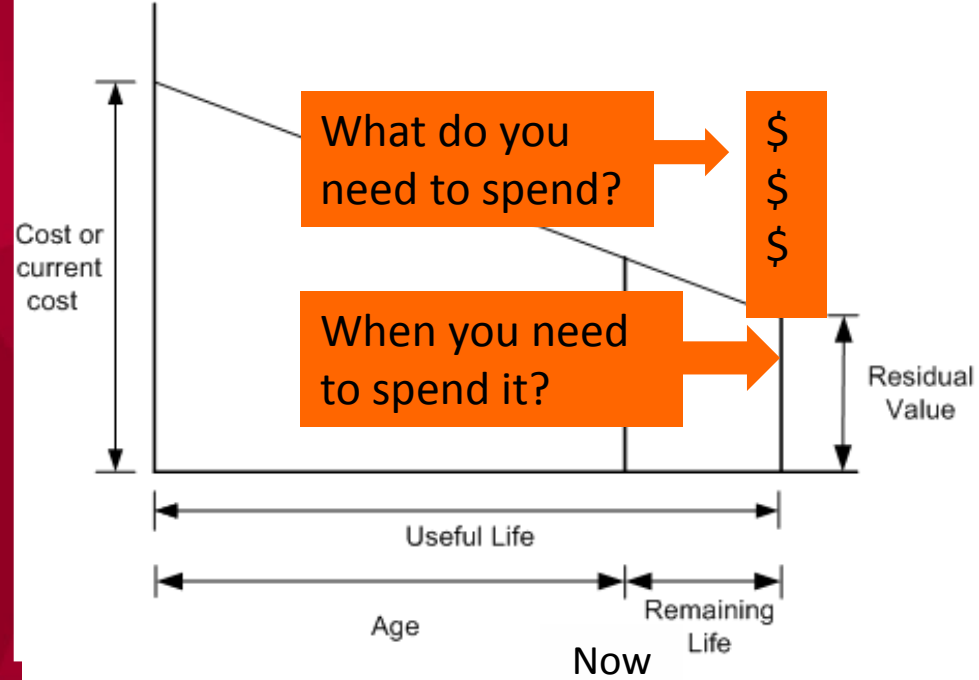
What can we learn from Asset Management?



What can we learn
from Asset
Management?

Investment
required for
sustainable
levels of service

Use the data for asset renewal planning



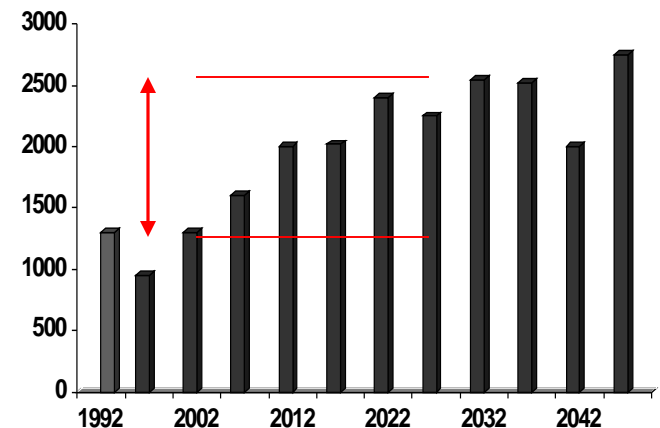
What can we learn
from Asset
Management?

Allow for future
demand

Manage the gap

(not just funding the gap)

- Understanding impact new assets
- Better asset information
- Timely maintenance
- Improved work practices
- Disposal of assets
- Alternative service delivery
- Lower levels of service
- Innovative solutions



Optimise
investment
priorities to best
meet community
needs

A particular level of
service has a
particular cost

Make the link between
levels of service and price

Regular

\$ Price per Gallon (including tax)



Special

\$ Price per Gallon (including tax)

4.579



Super+

\$ Price per Gallon (including tax)



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Financial Planning.

Moving from annual budgeting to long term financial planning.



Sustainability is maintaining financial & infrastructure capital for long term



+



Sustainability is
maintaining
financial &
infrastructure
capital for long
term

Account for
infrastructure in
our financial
statements

- information about
investment in assets

Sustainability is
maintaining
financial &
infrastructure
capital for long
term

Prepare 10 yr
financial plans
based on 20 yr AM
plans

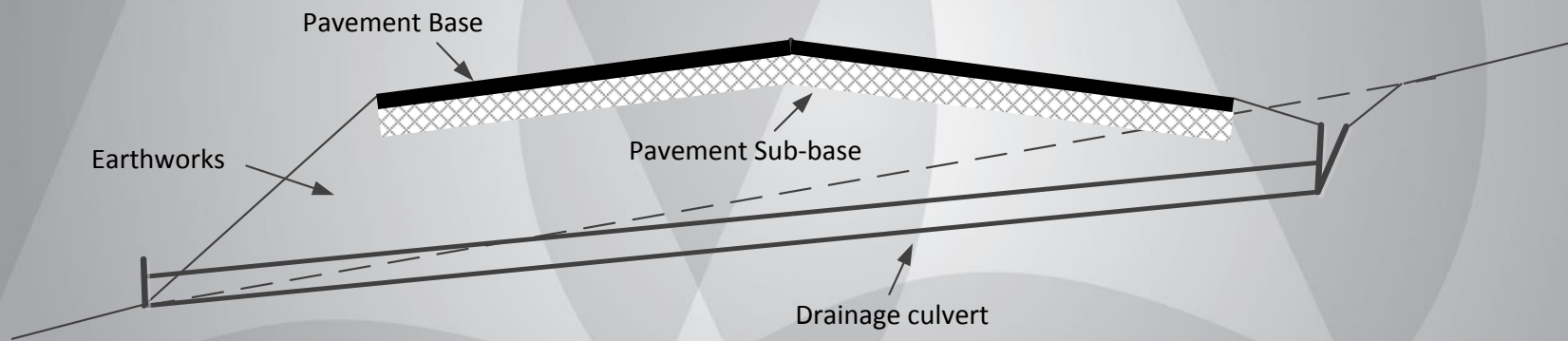
Account for infrastructure to reflect how managed



Engineers view of Highway

Engineer's view

- Pavement base – rehab after 10 years

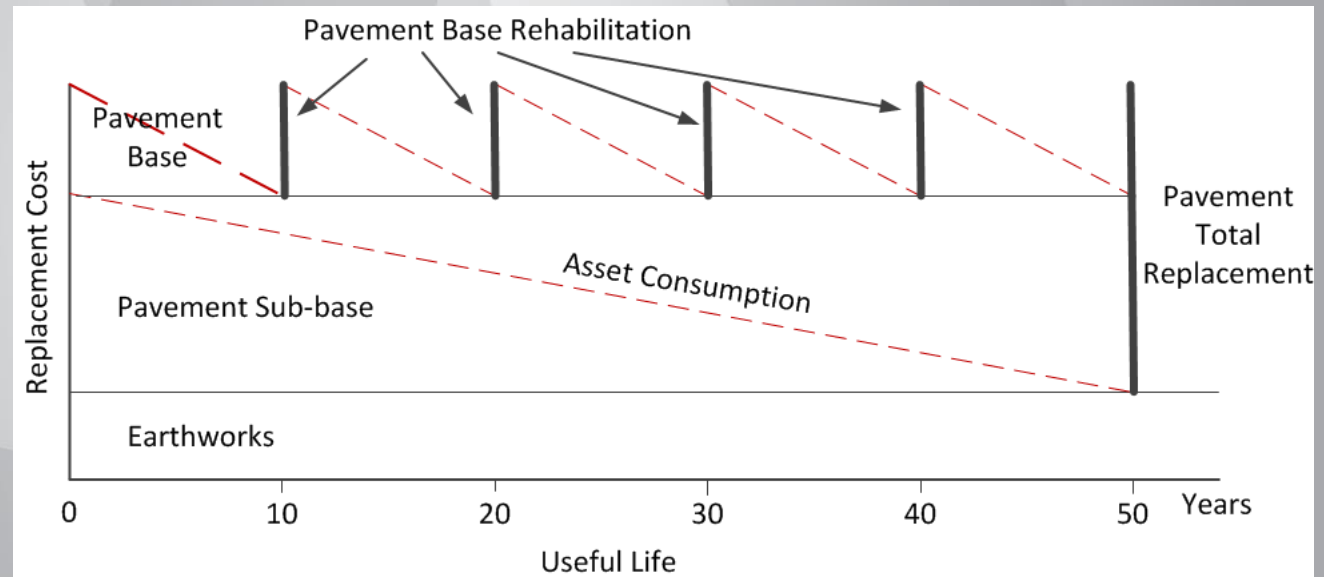


- Pavement sub-base – replaced ~ 50 yrs
- Earthworks – indefinite life for alignment

Accountant's view of a Highway

Accountant's view - 3 components

- Base
- Sub-base
- Earthworks



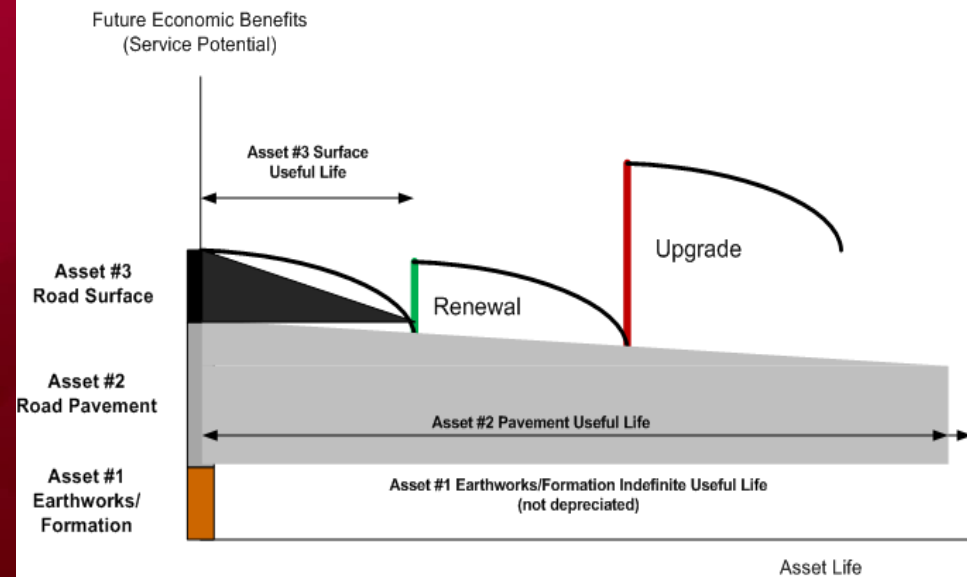
Annual average asset consumption = Replacement cost / Useful life

Account for
infrastructure to
reflect how
managed

Componentisation
& segments
simplifies the task

Assets recognised at component level

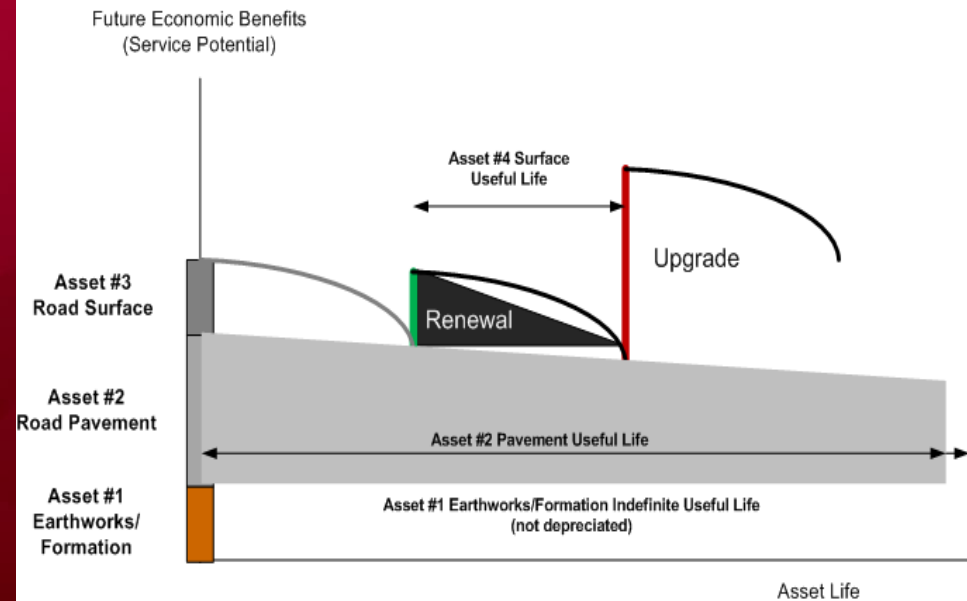
Consumption Phase 1



Depreciating the Assets – Phase I
(Recognising asset consumption)

Assets recognised at component level

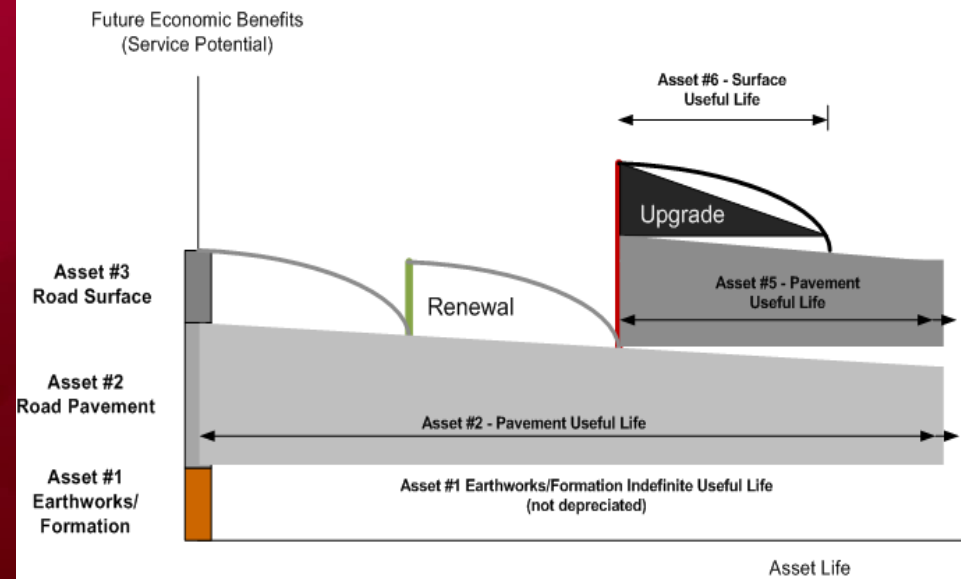
Consumption Phase 2



Depreciating the Assets Phase II

Assets recognised at component level

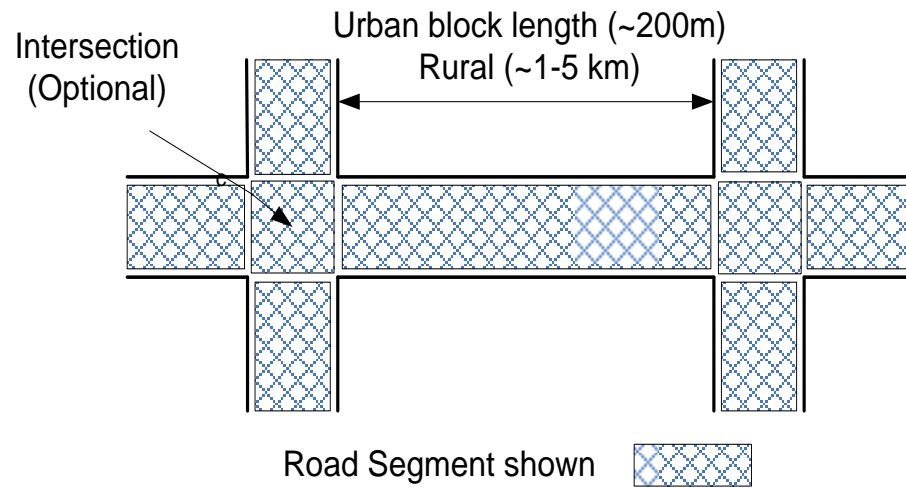
Consumption Phase 3



Depreciating the Assets - Phase III

Assets recognised
at component level

Segmentation



Account for
infrastructure to
reflect how
managed

Value based on
Current
Replacement Cost

Know the long term impact of your decisions



Know the long
term impact of
your decisions

Making the trade
offs between
service levels &
funding

Financial Sustainability: maintaining infrastructure & financial capital over long term



ASSET MANAGEMENT PLAN

Services required, how provided & funds required

SERVICE & FINANCIAL SUSTAINABILITY

LONG TERM FINANCIAL PLAN

How services are to be funded



Know the long
term impact of
your decisions

Make informed
prioritised
decisions

Implement 3 pillars to sustainably manage your community



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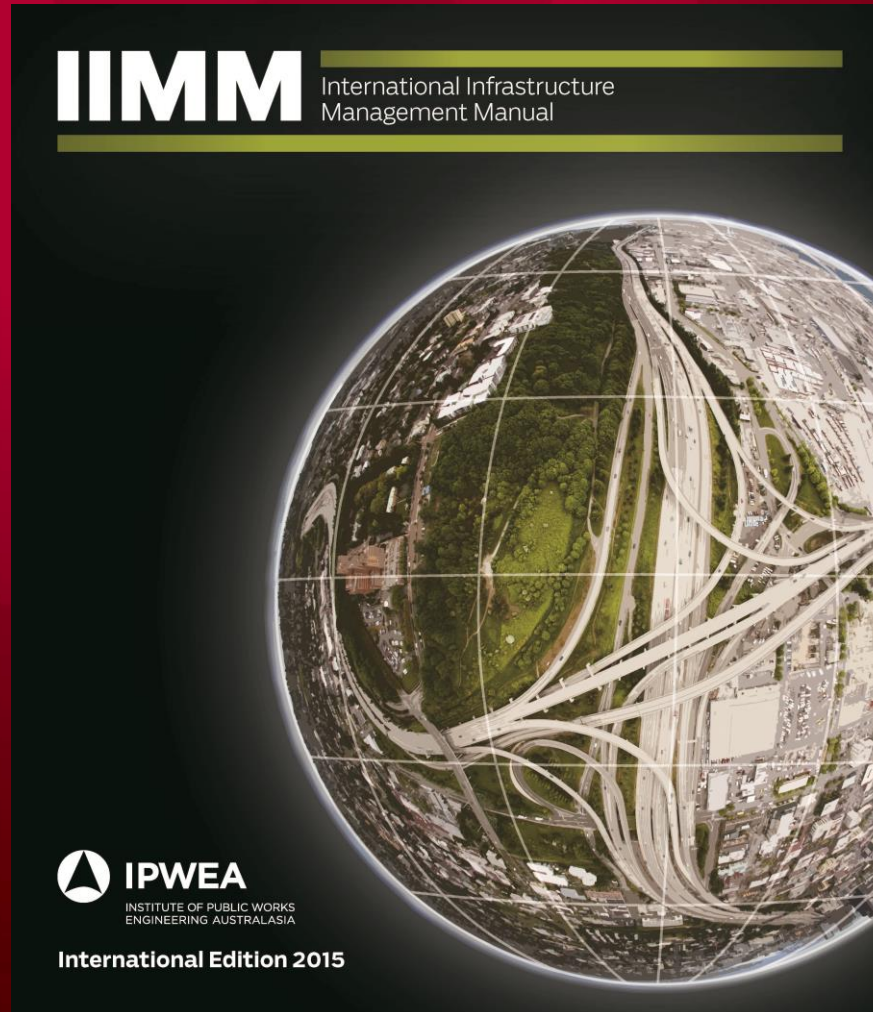
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IPWEA provides
national
frameworks,
tools & resources

www.ipwea.org



International Infrastructure Management Manual



Infrastructure Financial Management Manual

AIFMM Australian Infrastructure Financial
Management Manual



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Ensuring adequate investment in community infrastructure

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