

An Roinn Iompair  
Turasóireachta agus Spóirt  
Department of Transport,  
Tourism and Sport

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# ROADS Services Training Group

## LOCAL AUTHORITY ROADS CONFERENCE and EXHIBITION - 2018

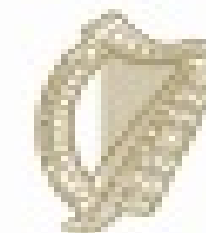
Lyrath Estate Hotel, Kilkenny, May 2018.

# LOCAL AUTHORITY ROADS CONFERENCE and EXHIBITION – 2018

## Capital Appraisal Requirements for Regional and Local Roads

David O'Grady and Kevin Threadgold

Department of Transport Tourism and Sport



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# Capital Appraisal Requirements for Regional and Local Roads



## Presentation Structure

- Stage 1: Context and Preliminary Appraisal - David O'Grady, Roads Division, DTTaS
- Stage 2: Detailed Appraisal - Kevin Threadgold, SRAD, DTTaS
- Stage 3: Implementation, Management and Evaluation - David O'Grady, Roads Division, DTTaS



# Value for Money



‘VFM is generally achieved when the ratio of benefit to cost is optimal for any given activity. VFM studies range from **economic appraisals** assessing costs and benefit from a national or regional perspective, to a smaller scale measurements of economy, effectiveness or efficiency for particular activities.’

*Common Appraisal Framework 2013*



## Public Spending Code

DPER Circular 13/13

Sept 2013

Common Appraisal Framework for  
Transport Projects and Programmes

March 2016

Management and Appraisal of RLR  
Strategic and Specific Projects

Circular RW06/2018

April 2018

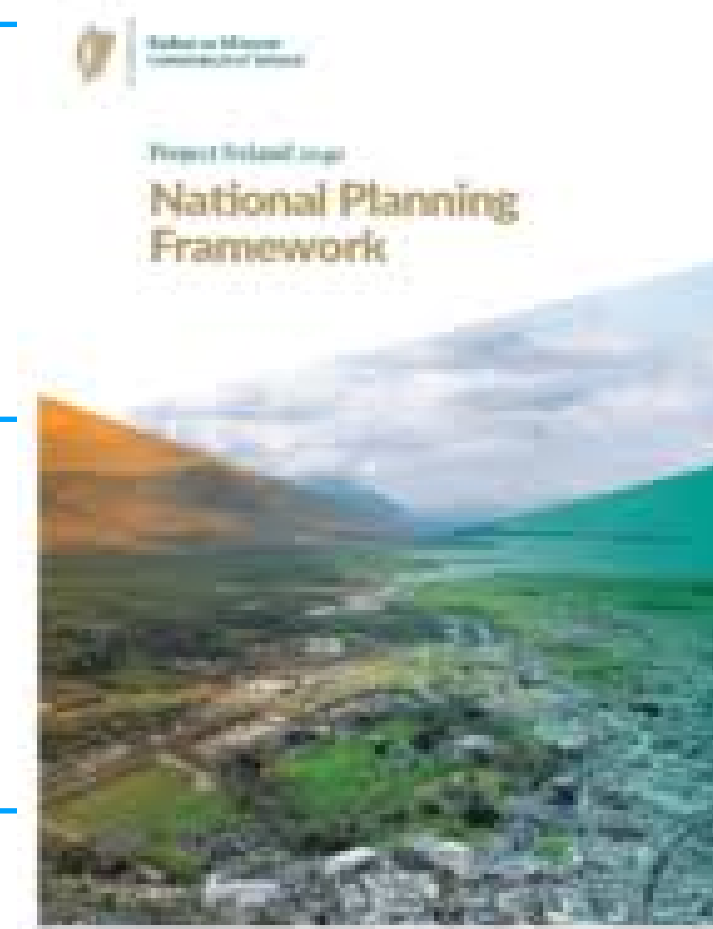
# What's different now?



## Project Ireland 2040

- Published Feb 2018

## National Planning Framework



## National Development Plan 2018-2027

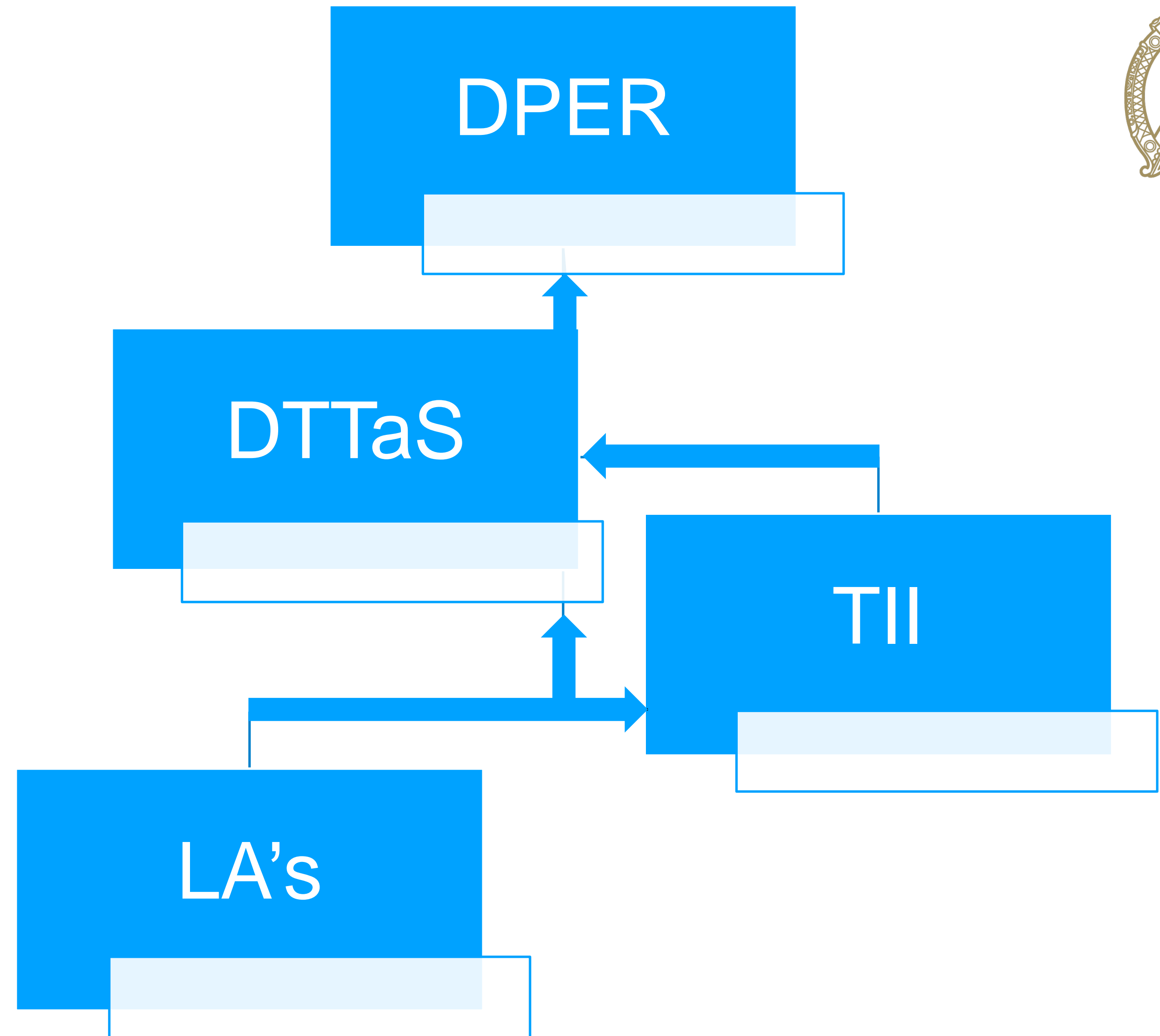


## Capital Plan 2016-2021

- Review August 2017



# Reporting Structure for Delivery of Investment Projects



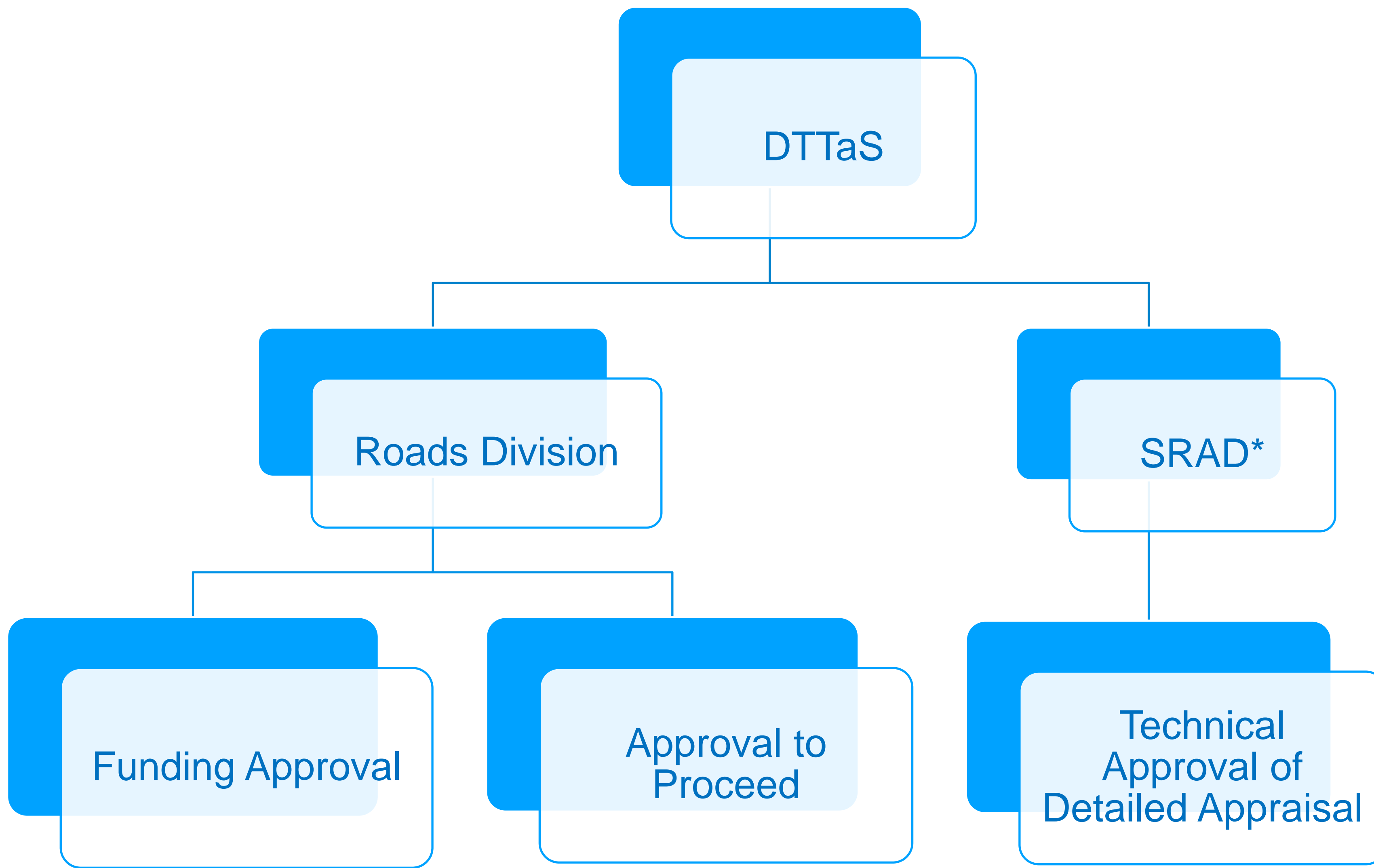




NOT INVITING  
APPLICATIONS



DTTaS Capital Appraisal Project Categories			Appraisal Type
Specific Improvement Grant Scheme (SG)	Total Project Cost Up to €5m incl VAT	Projects outside scope of Department's Bridge, Safety and Pavement Restoration and Rehabilitation Programme.	Preliminary Appraisal
Strategic Regional and Local Roads Project (SRLR)	Total Project Cost Greater than €5m incl VAT		Preliminary Appraisal and Detailed Appraisal



*\*SRAD: Strategic Research and Analysis Division, DTTaS*



Appraisal Stages		Reviewed By	Approved By	Approval to Proceed
Stage 1	Preliminary Appraisal (up to €5m incl VAT)	Roads Division	Roads Division	Roads Division
	Preliminary Appraisal (Projects > €5m incl VAT)	Roads Division/ SRAD	Roads Division	Roads Division
Stage 2	Detailed Appraisal (Projects > €5m incl VAT)	Roads Division/ SRAD	SRAD	Roads Division
Stage 3	Implementation, Management and Evaluation	Roads Division	Roads Division	Roads Division

# CAF Vs DTTaS Roads Division Vs TII Deliverables



DTTaS CAF	Business Case Requirements	DTTaS Roads Division Deliverables	TII Phases	TII Deliverables
Stage 1: Preliminary Appraisal	Define the objective	Preliminary Appraisal Form <ul style="list-style-type: none"> <li>- Preliminary Multi Criteria analysis</li> <li>- Preliminary Project Cost Estimate</li> </ul>	Phase 0/1 Scope and Pre-Appraisal/Concept and Feasibility	Project Appraisal Plan and Project Brief
	Clarify Scope		Phase 2 Option Selection	Preliminary Business Case
	Assess feasibility			
	Explore different options to achieve objective			
Stage 2: Detailed Appraisal	Analyse the main options	Detailed Appraisal Report Total Project Budget A	Phase 3 Design and Environmental Evaluation	Draft Detailed Business Case
	Risk Analysis			Final Detailed Business Case
	Recommendations			
Stage 3 Evaluation, Implementation and Monitoring	Planning and Design issues	Total Project Budget B Business Case Tender Documents	Phase 4 Statutory Processes	Updated detailed Business Case (if necessary)
	Evaluation plan and proofing			
	Construction and Implementation	Monthly progress reports Monthly financial reports	Phase 6 Construction and Implementation	
	Post Project Review	Closeout and Post Project Review		Phase 7 Closeout and review



## Stage 1: Preliminary Appraisal

Circular RW06/2018 includes:

Part 1: Appraisal Guidelines for RLR Capital Projects

Part 2: Preliminary Appraisal Form

*Appendix A: Preliminary Multi Criteria Analysis*

*Appendix B: Total Project Budget Template*

Part 3: Guidance notes for completion of Preliminary Appraisal Form



## Preliminary Appraisal Form

General Scheme Details  
Need for the scheme  
Problems Identified  
Objectives  
Project Justification  
Options Considered  
Statistics  
Land  
Statutory Process Required  
Proposed Outline Programme  
Sources of funding

Preliminary Multi Criteria Analysis – Appendix A  
Project Cost – Appendix B

*No DTTaS funding for this Preliminary Appraisal Stage*  
[4 Part 2 Preliminary Appraisal Form RLR Capital Projects.docx](#)



**Appendix A Preliminary Multi-Criteria Analysis for Regional and Local Road Capital Projects**

<b>Scheme Name:</b> Carlow Southern Relief Road	<b>Brief Description of proposal:</b> Additional link in ring road system around Carlow town		<b>Main Problems Identified:</b> Ease congestion on N80 approach to Town and improve access for commercial activity	<b>Preliminary Project Cost Estimate Incl VAT, Land, consultants etc (€m)</b>	
<b>Current typical C/way width</b> 10m	<b>Route No.</b> R448	<b>Speed limit:</b> 60km/hr	<b>Proposed Cross section:</b> C/way 10m + Cycle 2m plus footpath 1.5m plus verge 4m	€4.9m	
<b>Appraisal Criteria</b>	<b>Appraisal Sub-Criteria</b>	<b>Objective</b>	<b>Qualitative Statement</b> Does the Proposed Preferred Option meet any of the objectives. If so in what capacity?	<b>Sub criteria performance description (Use dropdown)</b> If no relevance to Objective enter 'Neutral'	<b>Sub-criteria score (Use dropdown menu for 1 to 7 score)</b>
				<b>Option:</b>	<b>Preferred Option</b>
<b>Economy</b>	Transport Efficiency and Effectiveness	Reduce journey times? Sufficient cross section provided?	Provision of additional link will improve journey times from x to y by approx 10 mins. Cross section can accommodate current and	6=Moderately Positive	6
	Wider Economic Impact	Improve economic performance of area, e.g. reduce transport costs		4=Not significant or Neutral	4
	Transport Reliability and Quality	Improve journey time reliability, e.g. improve Urban Congestion, provide missing link to maximise return on		4=Not significant or Neutral	4
<b>Safety</b>	Collision Reduction (PIA/mvkm)	Reduce collision rate using RSA collision database for subject road section		4=Not significant or Neutral	4
	Security	Improve safety conditions for all road users, e.g. lighting, pedestrian crossing		4=Not significant or Neutral	4
<b>Environment</b>	Air quality	Impact on Emmissions	Slight increase in emissions due to higher speed, however, will be balanced by reduced braking	4=Not significant or Neutral	4
	Noise and Vibration	Impact on road related noise and vibration	Reduced noise to adjacent properties due to less braking	5=Minor or slightly positive	5
	Landscape and Visual Qty	Impact on heritage sites		4=Not significant or Neutral	4
	Biodiversity	Impact on biodiversity, e.g. Natura site / a particular habitat		4=Not significant or Neutral	4
	Cultural, Archaeological , Architectural Heritage	Impact of scheme on Archaeological sites or national monument		4=Not significant or Neutral	4
	Land Use	Impact on agricultural holdings/ farm severance	2 Ha of land required to allow realignment	3=Minor or slightly negative	3
	Water Resources	Impact on water courses		4=Not significant or Neutral	4
<b>Accessibility and social inclusion</b>	Vulnerable groups	Impact on accessibility to key facilities, such as employment, education and healthcare for all road users, but in particular vulnerable groups		4=Not significant or Neutral	4
	Deprived Geographical area	Impact on accessibility to deprived areas e.g. a particular Rapid or CLAR area		4=Not significant or Neutral	4
<b>Integration</b>	Transport Objectives	Connectivity to NR's, Ports, Airports, Railways		4=Not significant or Neutral	4
	Land Use Integration	To meet Transport Objectives, e.g. planning documents, local, county, regional, national		4=Not significant or Neutral	4
	Geographic Integration	Enhanced regional accessibility and Connection between towns flagged in Nat planning Document		4=Not significant or Neutral	4
	Integration with other Governemnt Policies	Scheme supports Govt policy e.g. strengthen rural economies and communities	Supports NSO 3, strengthened rural economies and communities and NSO 1 Compact Growth	7=Major or highly positive	7
<b>Physical Activity</b>	Opportunities for pedestrians and cyclists	Enhancements for pedestrians and cyclists e.g. footpaths, wider Hard shoulder	Provides dedicated footpaths/cycleways to links to and from x and y	5=Minor or slightly positive	5





## Appendix B: Total Project Budget Sheet



<b>Project Name:</b>	<b>Project Status</b>	<b>Region</b>
	Pelim Appraisal	Southeast
<b>Road Authority</b>	<b>Length of Project Road</b>	
Carlow County Council	1.12	
<b>Total Project Budget Stage (Preliminary, A, B or C)</b>	<b>Latest Update date</b>	
Preliminary Project Cost Estimate	20/04/2018	
<b>Total land required (ha)</b>	<b>Start Year</b>	<b>Completion Year</b>
2	2020	2021

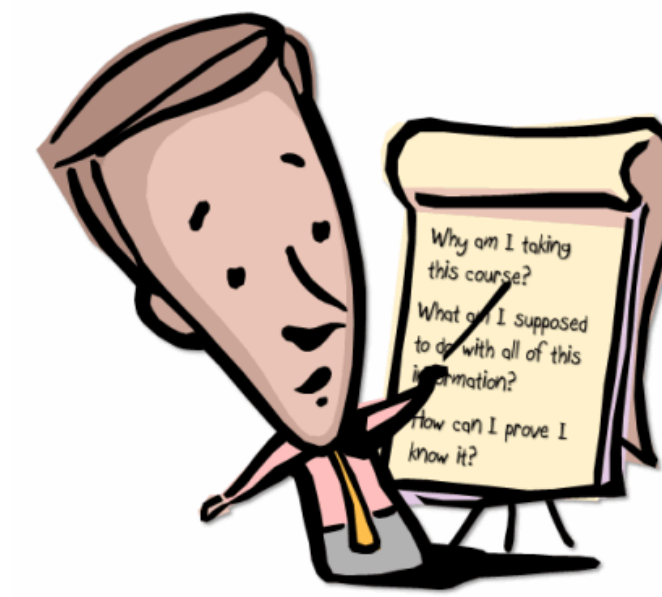
Base Cost Expenditure heading	Base cost (Inclusive of total risk)	Uninflated target cost	Pre 2018	2018	2019	2020	2021	2022	2023	Post 2023
Main Contract Construction (Incl VAT)	2.5	2.7				1.2	1.2	0.3		
<i>Employer Risk on Construction</i>	0.2									
Main Contract Supervision	0.24	0.26				0.13	0.13			
<i>Employer Risk on Supervision</i>	0.02									
Archaeology	0.05	0.06			0.05	0.01				
<i>Pre construction Archaeology risk</i>	0.01									
Advance works & other contracts	0.2	0.25			0.2	0.05				
<i>Employer risk</i>	0.05									
Land and property	1.15	1.25			0.4	0.7	0.15			
<i>Land issues risks</i>	0.1									
Planning and design (incl GI and topo)	0.16	0.192		0.02						
<i>Employer risk on P and D</i>	0.032									
<i>Other</i>										
<b>Subtotal (Excl Inflation and Programme risk)</b>	<b>4.712</b>	<b>4.712</b>	<b>0</b>	<b>0.02</b>	<b>0.65</b>	<b>2.09</b>	<b>1.48</b>	<b>0.3</b>	<b>0</b>	<b>0</b>
Add 5% inflation and programme risk	0.2356									
<b>TOTAL PROJECT BUDGET</b>	<b>4.9476</b>									
<b>Total Cost /km</b>	<b>4.4175</b>									
<b>Land Cost /Ha</b>	<b>0.625</b>									



Total Project Budget Updates and when Required		
Stage	Required Project Budget Update	When Required
Preliminary Appraisal	Preliminary Project Cost Estimate	Part of initial application and Preliminary Appraisal Form **
Detailed Appraisal	Total Project Budget A	Prior to approval to proceed to Planning, Design and Statutory Procedures.
Planning, Design and Statutory Procedures	Total Project Budget B	Following Planning Approval and Prior to approval to issue Notice to Treat and proceed to Procurement Stage.
Procurement Stage	Total Project Budget C	Following Tender Assessment Report and Prior to Approval to Award the Contract

**\*\* ‘Sponsoring Agency is Responsible for ensuring that the Appraisal is done on an objective basis and not as a case making exercise’ – Public Spending Code**

**Significant changes in Total Project Budget may Require Re-Appraisal**



# Summary Stage 1 Requirements

Common Appraisal Framework Stages	Requirements*	Reviewed By	Approved by
Stage 1 Pre-appraisal/ Preliminary Appraisal	Submit Preliminary Appraisal Form (Project up to €5m incl VAT)	DTTaS Roads Division	DTTaS Roads Division
	Consultation with SRAD/Roads Division (Project > €5m incl VAT)	DTTaS Roads Division/SRAD**	DTTaS Roads Division
	Submit Preliminary Appraisal Form (Project > €5m incl VAT)	DTTaS Roads Division/SRAD**	DTTaS Roads Division
	Submit Preliminary Project Cost Estimate	DTTaS Roads Division	DTTaS Roads Division
	Request Approval to proceed to Detailed Appraisal (if >€5m incl VAT) <b>OR</b>	DTTaS Roads Division	DTTaS Roads Division
	Request Approval to proceed to Planning, Design and Statutory Procedures (If <€5m incl VAT)	DTTaS Roads Division	DTTaS Roads Division

\* All Requirements are to be submitted to DTTaS Roads Division



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Stage 1: Context and Preliminary Appraisal ✓

## Stage 2: Detailed Appraisal

Stage 3: Implementation, Management and Evaluation

# Contents



- Public expenditure appraisal system  
(Public Spending Code, DPER & IGEEES)
- DTTAS roles and responsibilities
- Key steps when developing a Detailed Appraisal



# Irish Government Economic & Evaluation Service (IGEES)



- Established in 2012 by DPER

*“an integrated cross-Government service to enhance the role of economics and value for money analysis in public policy making”*

- Civil servants (economists/evaluators)
- IGEES units (e.g. SRAD within DTTAS)
- Outputs – policy analysis papers, VFMs, etc. etc.

# Appraisal Guidelines I – Public Spending Code



<http://publicspendingcode.per.gov.ie/>

- Since 2013
  - Rules (updated) to ensure VFM
- New requirements:*
- All public expenditure
  - Thresholds for appraisals
  - Others (VFMPR, QAP, etc.)



## The Public Spending Code

**Expenditure Planning, Appraisal  
& Evaluation in the Irish Public Service:  
Standard Rules & Procedures**



Central Expenditure Evaluation Unit  
Department of Public Expenditure and Reform  
2-4 Merrion Row  
Dublin 2  
Tel: +353 1 676 7571  
LoCall: 1890 66 10 10  
Fax: +353 1 678 9936  
[vfm@per.gov.ie](mailto:vfm@per.gov.ie)



# Appraisal Thresholds – Public Spending Code



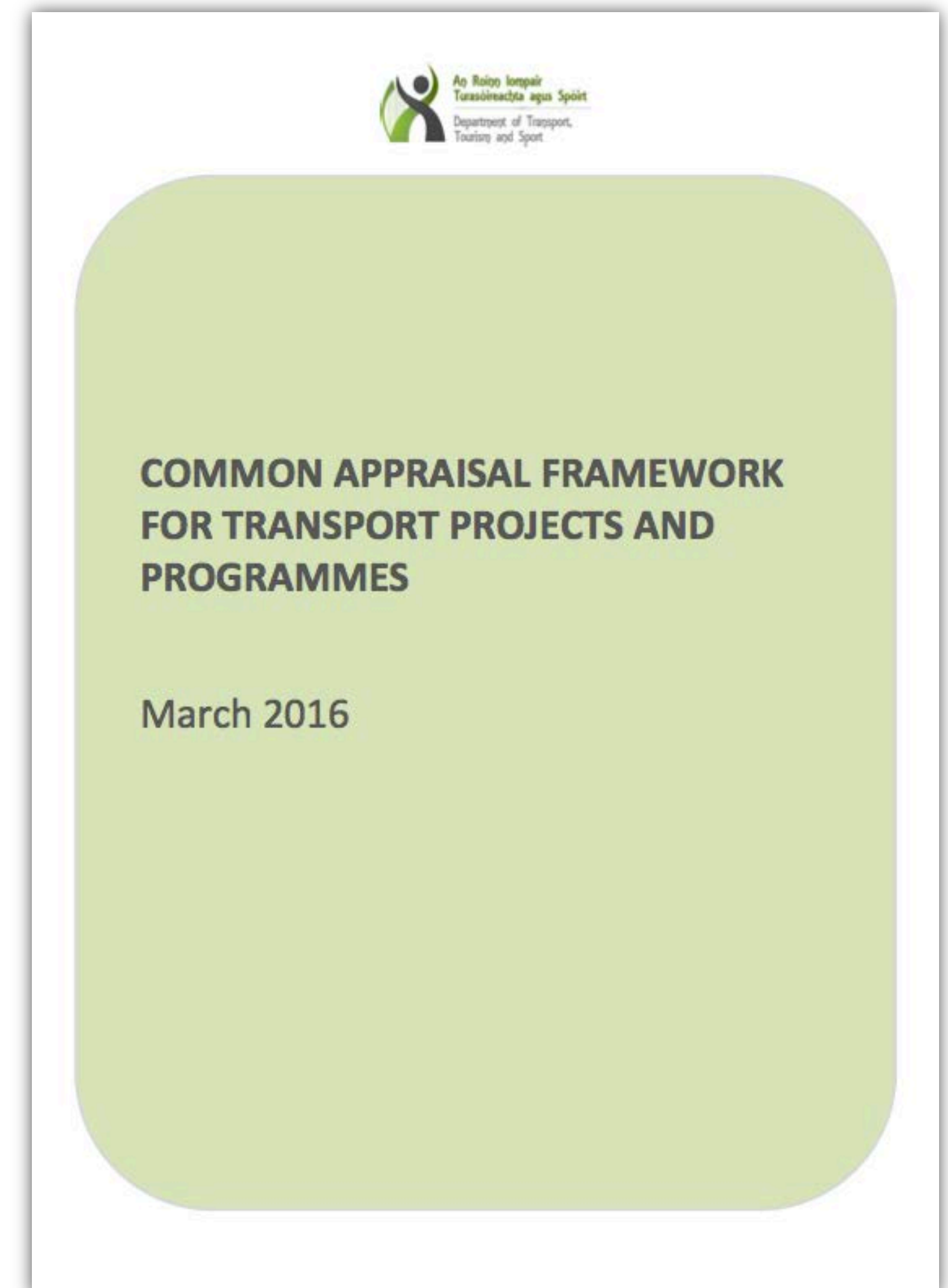
Estimated Project Cost	Scale of Appraisal Required	Required Engagement
Below €0.5 million	Simple Assessment	
Between €0.5m and €5m	Single Appraisal incorporating elements of a Preliminary and Detailed Appraisal	
Between €5m and €20m	At a minimum, a Multi Criteria Analysis (MCA)	
Over €20 million	Detailed Economic Appraisal - Cost Benefit Analysis (CBA) (or Cost Effectiveness Analysis (CEA))	Line Dept. and <u>PER IGEEES</u> confirm PSC compliance
Current expenditure (with an annual spend of at least €5m)	Detailed Economic Appraisal - Cost Benefit Analysis (CBA) (or Cost Effectiveness Analysis (CEA))	Line Dept. and <u>PER IGEEES</u> confirm PSC compliance
Over €100m*	As above	Sign-off at Cabinet level

# Appraisal Guidelines II – Common Appraisal Framework



<http://www.dttas.ie/corporate/english/appraisal>

- Latest edition 2016  
(update from '09)
- In tandem with PSC & literature
- Transport parameters
- Broader appraisal guidance
- Update in progress



# Business Case Process



## Problem Identification and Scoping

- Define the Objectives (*& rationale*)
- Clarify the Scope (*context*)
- Assess the Feasibility (*constraints*)
- Explore the (*multiple*) options to achieve the objectives

Preliminary Appraisal

## Defining Options and Assessing VfM

- Analyse the Main Options (incl. Do-Nothing/Do-Min)
  - Economic Appraisal (MCA/CBA/CEA)
- Financial Appraisal
- Risk Analysis

Detailed Appraisal

## Planning, Implementation and Review

- Planning and Design Issues including Implementation
- Evaluation Plan and Proofing
- Appendices

# Economic appraisal – common pitfalls



- Poorly defined rationale and/or objectives (outcomes not outputs)
  - What problem are you trying to solve?*
  - Which objectives really matter?*
- Lack of detailed/comparative assessment of options (state the obvious)
- Case making e.g. detailed appraisal of one option only
- MCA – weighting of criteria not clearly set out and documented, or even conducted
- CBA – number errors (parameter values or calculations)
- CBA – lack of clarity on assumptions e.g. benefits
- Consistency with PSC and CAF
- Lack of sensitivity analysis conducted on costs and benefits
- Presentation of results of the analysis (BCR, NPV)

# Economic appraisal – advice



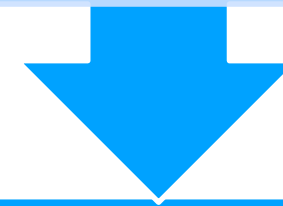
- Be accurate – base the proposal on evidence.
- Be clear (honest) about any assumptions.
- Show your workings.
- State the obvious.
- Pick the preferred option at the end of the appraisal, not the start!
- If unsure, ask for help (email: [sra@dttas.ie](mailto:sra@dttas.ie))

# Stages of approval



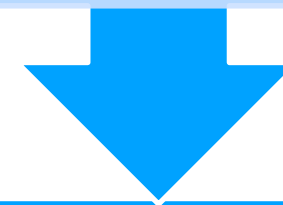
## Identify Project Proposal

If needed, agree assumptions/Project Appraisal Plan with SRAD



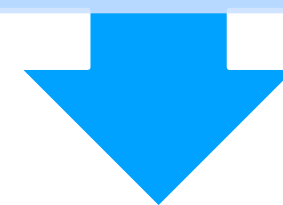
## Carry out Preliminary (& Detailed) Appraisal

If >€20m, submit CBA to SRAD/DPER for approval



## If necessary, revise & resubmit appraisal

Taking on board comments from Sanctioning Authority/SRAD/DPER



## Finalise Business Case

Sanctioning Authority gives approval in principle



Stage 1: Context and Preliminary Appraisal ✓

Stage 2: Detailed Appraisal ✓

**Stage 3: Implementation, Monitoring and Evaluation**

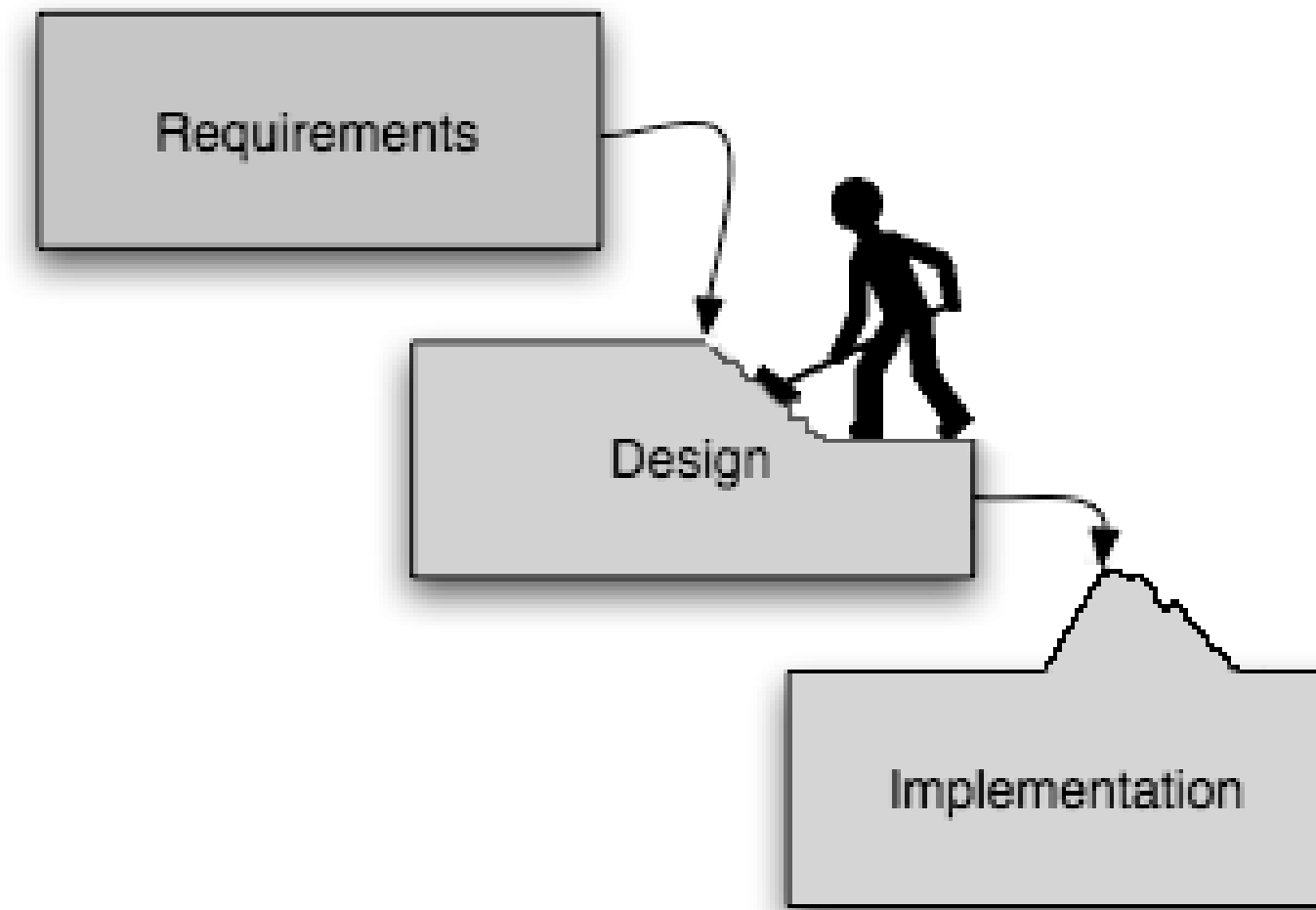
# Summary Stage 2 Requirements



Common Appraisal Framework Stages	Requirements*	Reviewed By	Approved by
<b>Stage 2 Detailed Appraisal (for projects in excess of €5m incl VAT or as required by Roads Division)</b>	Request Detailed Appraisal Meeting w/SRAD and Inspector	Roads Division/SRAD	SRAD
	Submit Detailed Appraisal Report	Roads Division/SRAD	SRAD
	Submit Total Project Budget A	DTTaS Roads Division	DTTaS Roads Division
	Request Approval to proceed to Planning, Design and Statutory Procedures	DTTaS Roads Division	DTTaS Roads Division

\* All Requirements are to be submitted to DTTaS Roads Division





## Stage 3: Implementation, Monitoring and Evaluation

Stage 3A	Stage 3B	Stage 3C	Stage 3D	Stage 3E
Planning Design and Statutory Procedures	Business Case	Procurement Stage	Implementation and Management	Post Project Review



## Stage 3A Planning, Design and Statutory Procedures

- Part 8, EIAR, CPO, Oral Hearing etc
- Prepare Total Project Budget B





## Stage 3B Business Case

- Compilation of all elements of Appraisal Process to date incl. Total Project Budget B

*Approval required to Issue Notice to Treat and to Proceed to Procurement*





## Stage 3C Procurement Stage

- Capital Works Management Framework applies
- Contract documents submitted to DTTaS Roads Division for Review
- Tender Assessment Report
- Total Project Budget C
- Updated Business Case
- Approval to Award Contract



## Stage 3D Implementation and Management of the Project

- **Monthly progress report and financial report**
- **Construction Stage Monitoring Committee**
- **Approval required if change to overall Project Budget**





## Stage 3E Post Project Review

- All projects exceeding €20m
- At least 5% of all others as decided by DTTaS



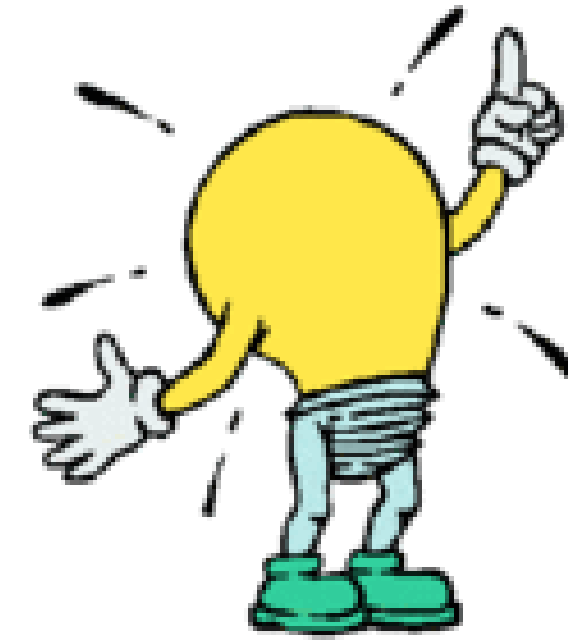
# Summary Stage 3 Requirements



Common Appraisal Framework Stages	Requirements*	Reviewed By	Approved by
<b>Stage 3 Implementation, Management and Evaluation</b>			
<i>Stage 3A Planning, Design and Statutory Procedures</i>	Submit Total Project Budget B	DTTaS Roads Division	DTTaS Roads Division
<i>Stage 3B Business Case</i>	Submit Business Case	DTTaS Roads Division	DTTaS Roads Division
	Request Approval to issue Notice to Treat	DTTaS Roads Division	DTTaS Roads Division
	Request Approval to proceed to Procurement Stage	DTTaS Roads Division	DTTaS Roads Division
<i>Stage 3C Procurement Stage</i>	Submit Tender Document for Review	DTTaS Roads Division	
	Request Approval to proceed to Tender	DTTaS Roads Division	DTTaS Roads Division
	Submit Tender Assessment Report	DTTaS Roads Division	DTTaS Roads Division
	Submit Total Project Budget C	DTTaS Roads Division	DTTaS Roads Division
	Submit Updated Business Case	DTTaS Roads Division	DTTaS Roads Division
	Request Approval to Award the Contract	DTTaS Roads Division	DTTaS Roads Division
<i>Stage 3D Implementation and Management of the Project</i>	Submit progress reports monthly or as agreed with Inspector	DTTaS Roads Division	DTTaS Roads Division
	Department Inspector is the DTTaS nominated member on Construction Stage Monitoring Committee.	DTTaS Roads Division	DTTaS Roads Division
<i>Stage 3E Post Project Review</i>	Submit Post Project Review report (On all projects in excess of €20m incl VAT and at least 5% of others as decided by DTTaS)	DTTaS Roads Division	DTTaS Roads Division
<b>* All Requirements are to be submitted to DTTaS Roads Division</b>			

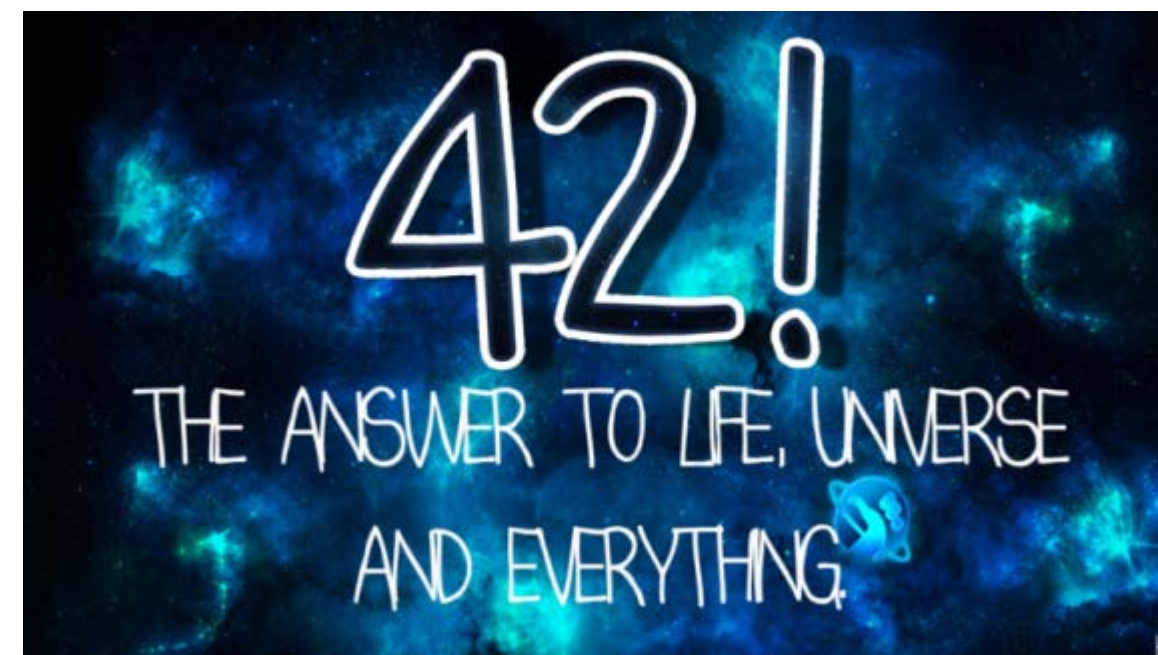


In Summary:



$$\sum p \int_0^n 12x \lim_1 A \cos^{-1} B \tanh C$$

**Ans:**

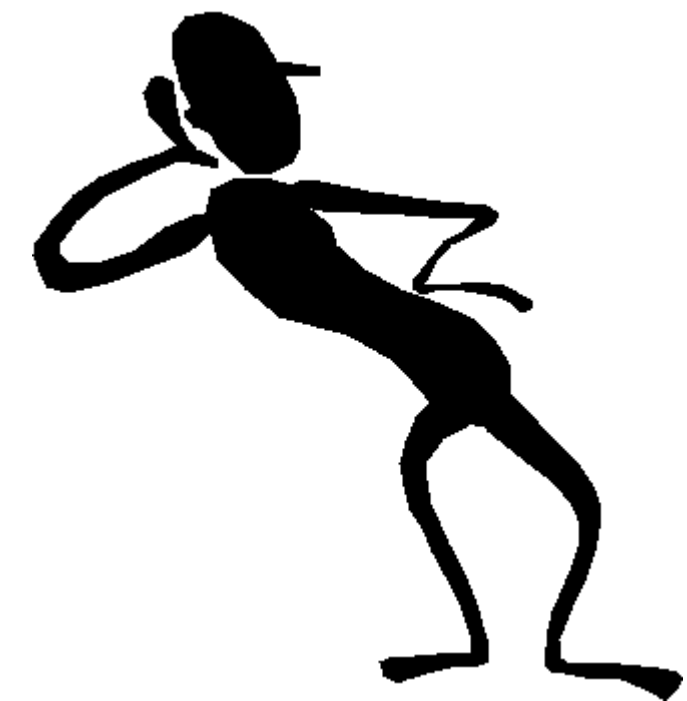






# Thanks for Listening

Not inviting applications!



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