Energy Efficiency Indicators
- IEA data collection

IEA-ECLAC Workshop
Paris, 29 May 2013

Energy Data Centre, IEA
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Mandate for the IEA data collection

- The 2009 IEA Ministerial meeting
  - Acknowledge the importance of energy efficiency indicators
  - IEA countries commit to annually report data for indicators through the IEA template

Energy efficiency indicators template

Energy Efficiency Indicators Template

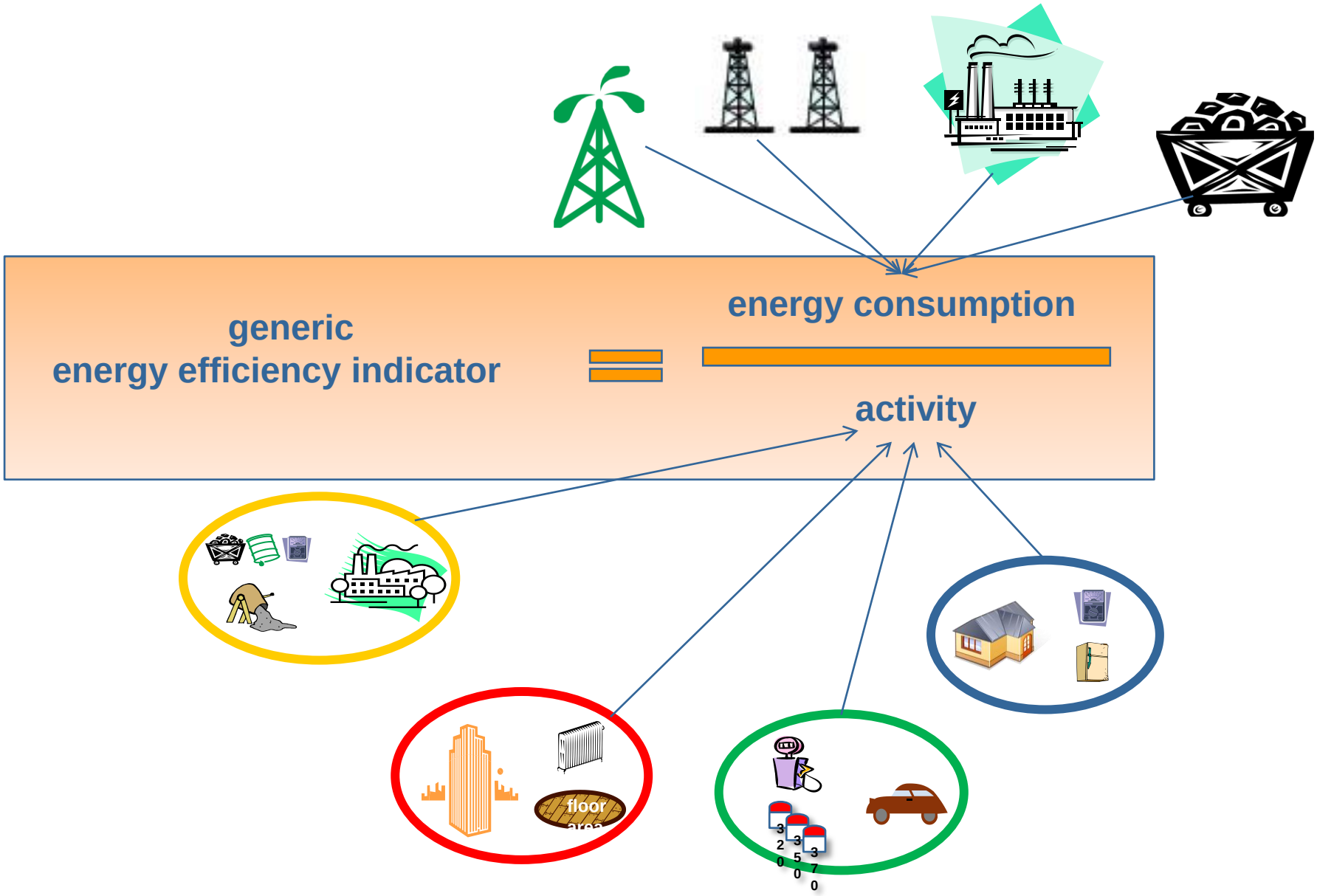
country name

Energy consumption & **Activity** data for:

- INDUSTRY
- SERVICES
- RESIDENTIAL
- TRANSPORT

COUNTRY DATA SECTION (to be	
MACRO ECONOMIC DATA	
COMMODITIES	
INDUSTRY	
SERVICES	
RESIDENTIAL	…nces data
TRANSPORT	
IEA DATA and AGGREGATE IND	
ELECTRICITY GENERATION	
BASIC INDICATORS	Predetermined set of aggregate energy and activity indicators
SUPPORT TOOLS	
USER REMARKS	To incorporate comments associated to the data from the individual sheets
DATA COVERAGE	Generates a graphical summary of data coverage (completed vs. expected)
SINGLE INDICATOR GRAPHS	To generate a graph for one energy indicator
MULTIPLE INDICATORS GRAPHS	To generate a graph comparing trends from multiple indicators
CONSISTENCY CHECKS	To run the integrated consistency checks

Energy efficiency indicators: definition



Indicators for industry

For 19 major ISIC sub-sectors (by fuel type)

energy efficiency indicator = **energy consumption** / **production**

Value-Added ($)

physical production (t)

Indicators for services

For each end-use:

- Space heating (climate corrected)
- Space cooling (climate corrected)
- Lighting
- Other building use
- Non-building use

energy efficiency indicator = **energy consumption** / **services activity**

Value-Added ($)	*floor area (m²)*	*# of employees*

Indicators for residential

For each end-use:

- **Space heating (climate corrected)**
- **Space cooling (climate corrected)**
- **Water heating**
- **Cooking**
- **Lighting**
- **Appliances (energy use, stock, diffusion)**

energy efficiency indicator = **energy consumption** / **residential activity**

# of dwellings

floor area (m²)

Indicators for transport

- Transport purposes
  - passenger / freight
- Transport modes
  - road, rail, air, water, etc.

energy efficiency indicator = energy consumption / transport activity

Passenger-km or ***tonne-km***

Vehicle stock

×

Distance travelled

×

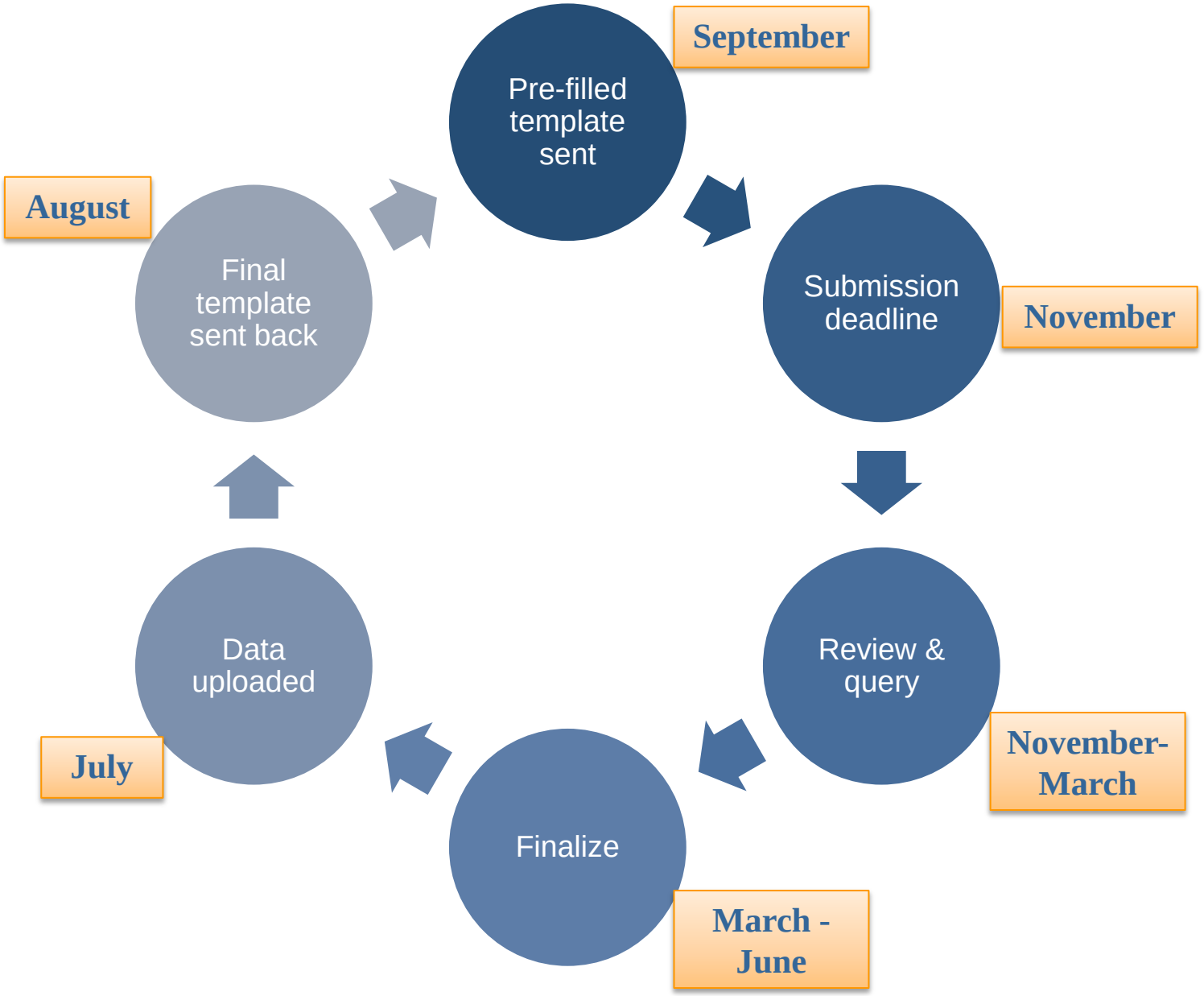
Occupancy

Load factor

Example: structure of template for transport

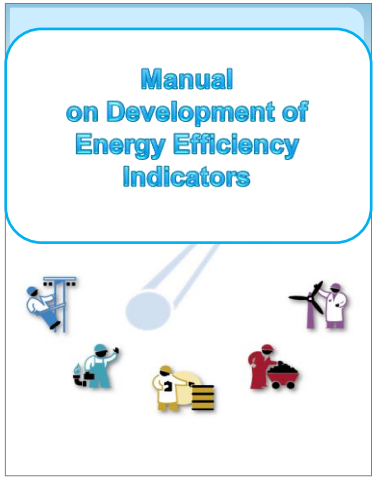
TRANSPORT	units	2005	2006	2007	2008	2009	sources	comments
Menu | Legend | Check all/none | Add remarks | Manual								
Activity & Structure indicators								
Passenger transport [passenger-kilometres]								
Cars, SUV and personal light trucks	10^9 pass-km	688.99	744.86	768.35	736.78	0	Country submission	
- gasoline (spark ignition) engine	10^9 pass-km	0	0	0	0	0		
- diesel (compression ignition) engine	10^9 pass-km	0	0	0	0	0		
Motorcycles (2 wheelers) & 3 wheelers	10^9 pass-km	74.03	75.45	75.82	76.17	0	Country submission	
Buses	10^9 pass-km	101.20	103.05	102.92	102.26	0	Country submission	
Passenger Trains	10^9 pass-km	50.47	50.89	49.68	49.52	0	Country submission	
Domestic passenger airplanes	10^9 pass-km	12.81	13.93	15.33	15.06	0	Country submission	
Domestic passenger ships	10^9 pass-km	3.73	4.07	4.06	3.83	0	Country submission	
Total Passenger Transport	**10^9 pass-km**	**931.22**	**992.25**	**1,016.16**	**983.62**	**0**		
Freight transport [tonne-kilometres]								
Freight & Commercial road transport	10^9 tonne-km	211.80	187.01	179.41	178.16	0	Country submission	
- gasoline (spark ignition) engine	10^9 tonne-km	0	0	0	0	0		
- diesel (compression ignition) engine	10^9 tonne-km	0	0	0	0	0		
Freight trains	10^9 tonne-km	24.83	26.19	27.38	25.89	0	Country submission	
Domestic freight airplanes	10^9 tonne-km	0.98	1.04	1.11	1.00	0	Country submission	
Domestic freight ships	10^9 tonne-km	46.93	46.67	52.30	46.89	0	Country submission	
Total Freight Transport	**10^9 pass-km**	**284.54**	**260.91**	**260.20**	**251.94**	**0**		
Freight transport [tonnes]								
Freight & Commercial road transport	10^6 tonnes	1,508.70	1,483.87	1,496.88	1,482.31	0	Country submission	
- gasoline (spark ignition) engine	10^6 tonnes	0	0	0	0	0		
- diesel (compression ignition) engine	10^6 tonnes	0	0	0	0	0		
Freight trains	10^6 tonnes	0	0	0	0	0		
Domestic freight airplanes	10^6 tonnes	0	0	0	0	0		
Domestic freight ships	10^6 tonnes	79.45	79.03	88.81	79.86	0	Country submission	
Vehicle kilometres								
Cars, SUV and personal light trucks	10^9 vkm	405.29	438.15	451.97	433.40	0	Country submission	
- gasoline (spark ignition) engine	10^9 vkm	275.03	284.43	280.95	259.92	0	Country submission	
- diesel (compression ignition) engine	10^9 vkm	114.70	136.63	152.81	153.75	0	Country submission	

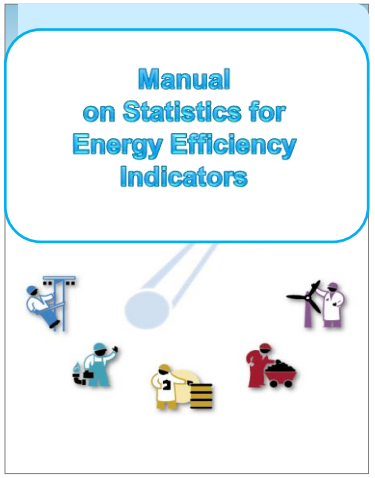
The annual cycle



Two manuals being developed in parallel

- **Development of indicators**: to provide guidance and methodological tools to develop energy and energy efficiency indicators
- **Statistics for indicators:** to provide guidance on how to collect the data needed for those indicators
  - Includes a compilation of existing practices from across the world
- Draft of core chapters will be sent for review soon (release expected in the Fall)





Energy Efficiency Indicators workshop

- IEA, **11 ~ 12 June**, 2013
- **Main topics**:
  - **Current status and needs** for energy indicators
  - **Recent development and progress** in data reporting and indicators development
  - **Overcoming the challenges** – Country experience
  - **Development of tools** to support the development of energy efficiency indicators
  - **Raising the profile and visibility** of energy efficiency indicators

IEA is ready to provide support to fill in the template.

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Thank you for your attention