

## Template for Evidence(s) UI GreenMetric Questionnaire

University : Universitas Sebelas Maret  
Country : Indonesia  
Web Address : <https://uns.ac.id/> web greencampus UNS <http://greencampus.uns.ac.id/>

### [2] Energy and Climate Change (EC)

#### [2.3] Smart Building Implementation

\*Min. at least five requirements for each building

No.	Name	Place	automation		safety				energy		water		indoor environment				lighting				Building Area (m <sup>2</sup> )
			B1	B2	S1	S2	S3	S4	E1	E2	A1	A2	I1	I2	I3	I4	L1	L2	L3	L4	
1	Library Building Universitas Sebelas Maret;	Surakarta, Indonesia	x		x	x	x		x		x					x	x	x		x	7,458 m <sup>2</sup>
2	Educational Hospital Building (UNS Hospital) Universitas Sebelas Maret;	Surakarta, Indonesia	x		x	x			x		x					x	x		x		30,285 m <sup>2</sup>
3	Medical Faculty Building Universitas Sebelas Maret;	Surakarta, Indonesia	x		x	x			x		x					x	x				23,026 m <sup>2</sup>
4	Faculty of Agriculture Building Universitas Sebelas Maret; Building of FP	Surakarta, Indonesia	x		x				x		x					x			x		11500 m <sup>2</sup>
5	Post Graduate Building Universitas Sebelas Maret;	Surakarta, Indonesia	x		x				x		x					x			x		9000 m <sup>2</sup>
6	UNS Inn Building Universitas Sebelas Maret;	Surakarta, Indonesia	x		x				x		x					x			x		12922 m <sup>2</sup>
7	Nurul Huda Mosque Universitas Sebelas Maret	Surakarta, Indo			x						x								x		5675 m <sup>2</sup>
Total																					99866 m <sup>2</sup>

— Please compile one row for each building (or homogeneous part of it) by ticking with a "X" for each requirement —

#### Smart building implementation

$$\frac{\text{total smart building area}}{\text{total building area}} \times 100\%$$

Example:

**\*Total Building Area: 367918 m<sup>2</sup>**

**Therefore percentage of the Smart building is : 99866: 367918 x100% = 27.14 %**



Figure 1. Smart Building implementation in the Library Building, Universitas Sebelas Maret



Figure 2. Smart Building implementation in the UNS University Hospital



Figure 3. Smart Building implementation in the Medical Faculty Building UNS



Figure 4. Smart Building implementation in the Building E, Faculty of Agriculture UNS



Figure 5. Smart Building implementation in the Post Graduate Building UNS



Figure 6. Smart Building implementation in the UNS Inn



Figure 7. Nurul Huda Mosque UNS

			
<p>Automatic Door Sensor System applied in the UNS University Hospital</p>	<p>Automatic Fire Alarm Sensor System applied in in the UNS Inn</p>	<p>CCTV as a security system in UNS</p>	
			
<p>Smart building impementation by using <i>Fire detector</i>, <i>sprinkler</i>, dan <i>fire alarm</i> in all over the floor areas in the Library Building UNS .</p>	<p>The use of Vertical Circulation to the 8 th floor of the Library Building is provided by lift for diffabel</p>	<p>The Security system of Museum Building has been provided by Fire protection System: <i>sprinkler</i>, <i>fire alarm</i>, and <i>exhaust fan</i>.</p>	



**Description:**

The Smart building System has been implemented in the Several buildings in UNS by utilized the smart building componets, as follows: automatic fire alarm sensor system, automatic water tab and elevator for vertical sirculation in the building. Several building, which have been applied smafrt building cmonents are : the Medical Faculty Building, the Faculty of Agriculture Building; The Post Graduate Building; the Library Building; UNS Inn, the UNS University Hospital.