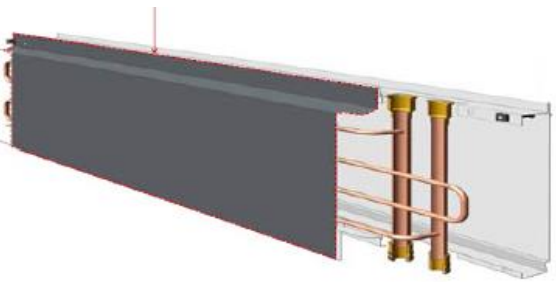
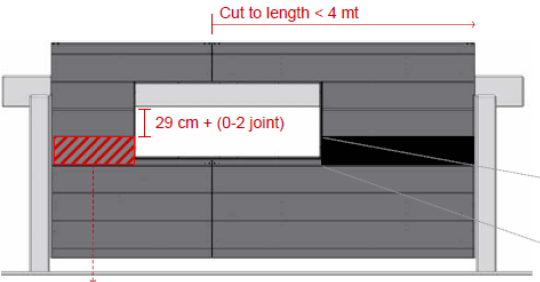
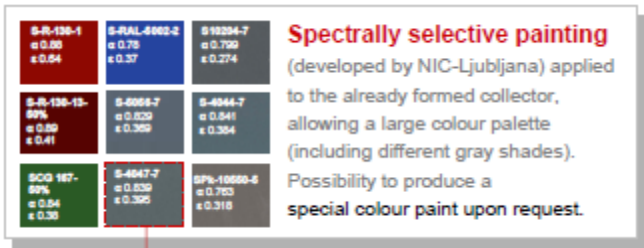


Example name: Solar thermal facade

Template completed by: Dr Mervyn Smyth, Uni of Ulster, m.smyth1@ulster.ac.uk For installations <i>BISTS Location:</i> Level of BISTS integration Rush level 2 / Reijenga level 2 ☐ New Build ☐ Refurbishment ☐ Other:	
Type of BISTS: Active/Passive/Hybrid Function(s): ☐ Air heating ☐ Water heating ☐ Combi-system ☐ Cooling/ventilation/shading ☐ PV/T ☐ linked to another system (e.g., heat pump) ☐ Other:	 Dummy elements (without hydraulic system) for non exposed areas and too short planks.
Building element: ☐ Facade ☐ Roof ☐ Other	 Spectrally selective painting (developed by NIC-Ljubljana) applied to the already formed collector, allowing a large colour palette (including different gray shades). Possibility to produce a special colour paint upon request.
BISTS characteristics: The novel collector is designed using existing metal claddings or planks rather than existing collectors, presenting an unglazed metal collector for façade. Based on users aesthetic preferences and desired freedom the system was surveyed and evaluated on shape, size, joints, texture, finishing and colour from over 170 respondents. Their feedback suggest that cutting planks to length modules gives freedom and the plank shape is considered as very good, flat surfaces and matt finishing are preferred, colour choice should be as large as possible, with a minimum of 20 colours. Architects preferred grey shades, followed by blues and reds.	

Stage of Development:	Responsible:
☐ Idea/Patent	
☐ Prototype	
☒ Demonstration	
☒ Integral building element	
☐ Commercially available	
BISTS description and context	
System viability Easy to integrate (retrofit + new buildings) thanks to flexibility in collector dimensions and availability of dummy elements	
Modelling and simulation tools developed/used Visual simulation tools	

BISTS Performance data

Based on:

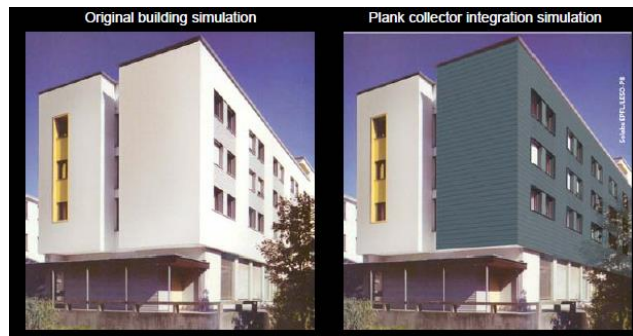
- ☐ Estimation
- ☒ Detailed simulation
- ☐ Measurement/testing
- ☐ Long-term monitoring

Performance parameters

For integrated systems:
key performance indicators -

For separate collectors:
performance rating coefficients -

Other:

**Additional information:****Sources and references:**

C Maria, M Probst. Development of a novel solar thermal façade. Poster n°79. Improving the architectural quality of building integrated solar systems: EPFL, Journées des Doctorants ENAC 6–7 Juillet 2006