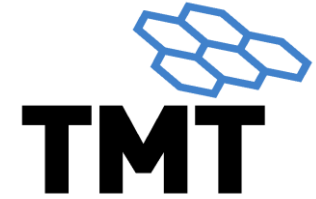


# THIRTY METER TELESCOPE

Status Report

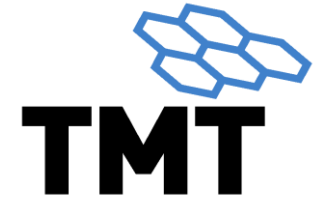
June 12, 2014





## Some General Points

- The TMT is the highest priority in the LRP
- Canada (through ACURA) is a founding member of the TMT
- ACURA and NRC have been partners in the preconstruction phase
- Canada's role in the preconstruction phase has been primarily :
  - design of the enclosure (Dynamic Structures Ltd)
  - design of the adaptive optics system NFIRAOS (NRC)
- Canadian investment to date is \$33M US

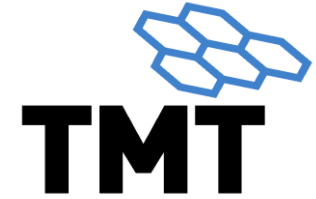


## Status of the Partnership

| Partner       | Status           | Plan Contribution<br>to Construction*<br>(\$M USD) | Member<br>Share<br>(%) |
|---------------|------------------|--|------------------------|
| Japan         | Member           | 340.5  | 19.4                   |
| China         | Member           | 154.7  | 9.3                    |
| Caltech       | Member           | 110.7  | 12.6                   |
| UC            | Member           | 110.7  | 12.4                   |
| India         | Associate        | (182.1)  | (9.3)                  |
| AURA (NSF)    | Associate        | 0.0  | (1.3)                  |
| <b>Canada</b> | <b>Associate</b> | <b>(292.9)</b>                                     | <b>(18.7)</b>          |
| Other         | N/A              | (390.3)  | (17.0)                 |
| Totals        |                  | <u>1581.8</u>                                      | <u>100.0</u>           |

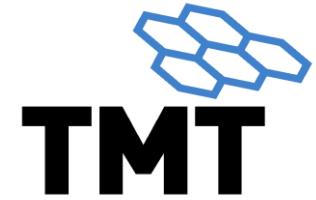
TMT moving into construction phase with \$98M allocated in 2014

\* Costs 2014-2023 with enclosure construction beginning in 2015



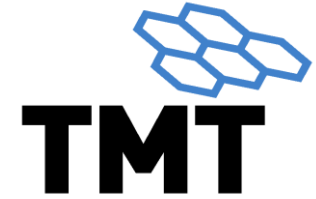
## Canada's role as Associate Member

- Adhering organization is ACURA (NRC cannot sign legal MOA)
- NRC is performing work packages (NFIRAOS)
- NRC Contribution about \$3M (in-kind)
- MOU between ACURA and NRC on respective roles



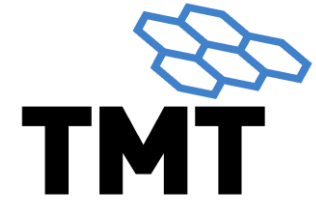
## Canada's contributions to construction

| <u>Item</u>         | <u>\$M USD</u> |
|---------------------|----------------|
| Enclosure           | 151.4          |
| NFIRAOS             | 70.4           |
| Cash (pooled funds) | 70.1           |
| Total               | <hr/> 292.9    |



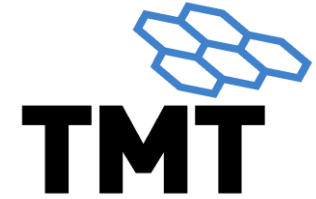
## Project process

- May 6/14 TMT formed legal entity: **TMT International Observatory**
- May 22/14 **DTP1** taken to proceed to construction for 1 yr  
Budget \$98M USD (incl. \$20M cash)
- Mid-July /14 Decision on MK on site sublease by Hawaii BLNR  
Initiation of construction phase
- October 7/14 Ground breaking ceremony on MK  
ACURA will participate
- October 8/14 Presentation of Plan B for building enclosure
- Circa May /1 **DTP2** to be taken when Canada has made its decision  
No penalty to existing members for withdrawal



## Process for securing funds in Canada

- **Coalition for Canadian Astronomy**  
**(CASCA, ACURA, Industry)**
- **Communications with NRC/Industry Canada/universities**  
**(no funding yet)**
- **Need a champion at the political level (MOSST)**
- **University support is a key factor (CFREF - \$150M/yr)**
- **Need a plan for funding through University/Government partnership**



# Coalition TMT Planning Team

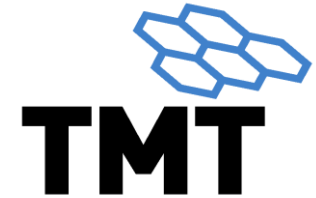
## Membership

Coalition co-chairs  
Canadian Project Director  
ACURA ED and S/T  
LRPIC Chair  
Senior level University reps

## Single Term of Reference

**Develop and implement a strategy for funding  
the Canadian share of TMT within 1 year**





## Issues for the LRPIC/MTR

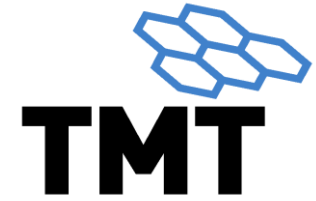
Expect TMT will have run its course before MTR report

### Potential short term issue

- **What are we willing to give up to get the TMT?**

### Longer Term Issue

- **Transformation of NRC and astronomy governance**



## Bottom Line

**The TMT train is leaving the station**

**We need to get on board!**