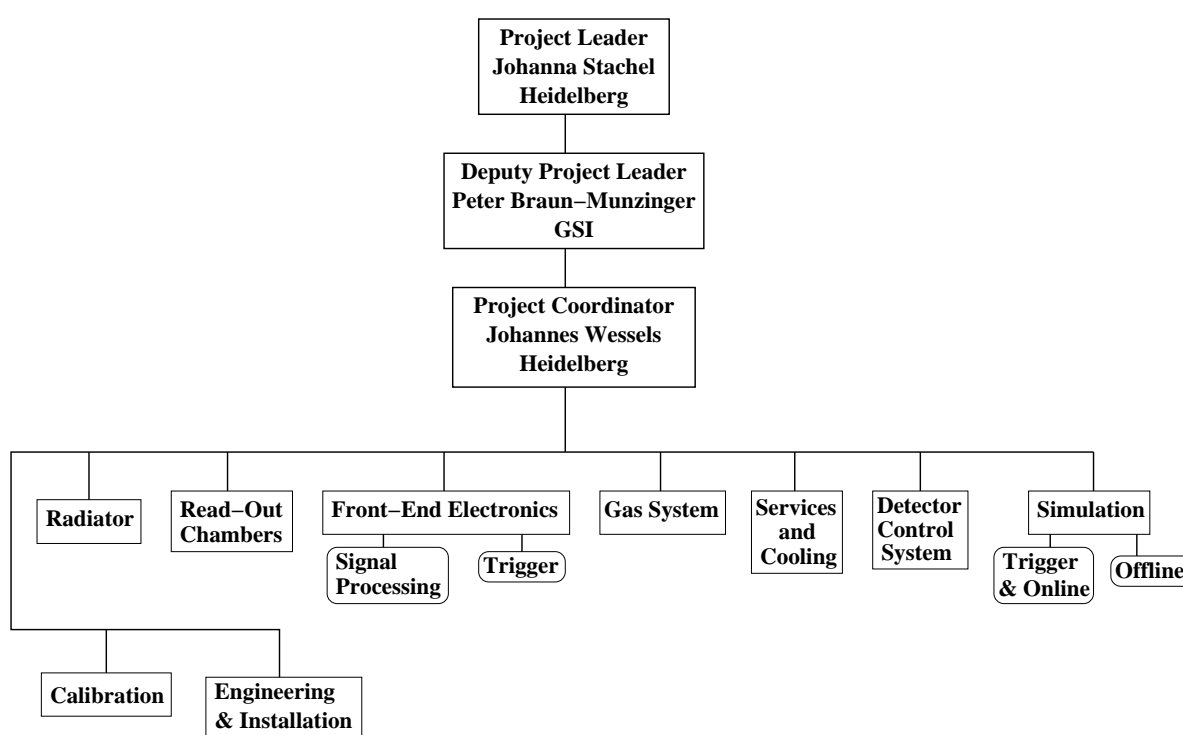


## 17 Responsibilities, cost, and schedule

### TRD organization

The ALICE TRD organization comprises a project leader, a deputy project leader, a project coordinator and nine sections: Radiator, Read-Out Chambers, Front-End Electronics, Gas System, Services and Cooling, Detector Control System (Slow Control), Simulation, Calibration, and Engineering & Installation. The section Front-End Electronics contains two groups, (i) the processing, storage and read-out of the detector signals, and (ii) the hardware and software preparing the level 1 trigger decision. Similarly, the Simulation section contains two groups, (i) simulations of the online tracking and trigger performance, and (ii) development and application of the offline software.



### TRD task force

The following persons have contributed to the work presented in this Technical Design Report.

A. Andronic, V. Angelov, A. Anjam, H. Appelshäuser, C. Blume, P. Braun-Munzinger, D. Bucher, O. Busch, A. Castillo-Ramirez, V. Catescu, M. Ciobanu, S. Chernenko, V. Chepurnov, J. de Cuveland, H. Daues, A. Devismes, M. Dorn, M. Eichhorn, L. Efimov, O. Fateev, Ch. Finck, P. Foka, C. Garabatos, M. Gersabeck, P. Glässel, R. Glasow, M. Gutfleisch, J. Hehner, N. Heine, N. Herrmann, A. Ierusalimov, M. Ivanov, M. Keller, S. Keßen, F. Lesser, V. Lindenstruth, T. Lister, S. Martens, T. Mahmoud, A. Marin, M. Marquardt, D. Miskowicz, W. Niebur, Yu. Panebratsev, T. Peitzmann, V. Petracek, A. Petrov, M. Petrovici, A. Radu, C. Reichling, A. Reischl, K. Reygers, M.J. Richter, I. Rusanov, A. Sandoval, H. Sann, R. Santo, R. Schicker, R. Schneider, M. Schulz, W. Seipp, S. Sedykh, S. Shimanski, R.S. Simon, L. Smykov, H.K. Soltveit, H.J. Specht, J. Stachel, H. Stelzer, H. Tilsner, W. Verhoeven, B. Vulpescu, A. Walte, I. Weimann, S. Wende, J.P. Wessels, B. Windelband, O. Winkelmann, C. Xu, V. Yurevich, Yu. Zanevsky, O. Zaudtke, R. Ziegler, A. Zubarev.

### TRD TDR editorial committee

The TRD TDR editorial committee was composed of the following persons:

A. Andronic (editor), H. Appelshäuser, C. Blume, P. Braun-Munzinger, D. Bucher, P. Foka, C. Garabatos, N. Herrmann, V. Lindenstruth, A. Marin, V. Petracek, A. Sandoval, R. Simon, J. Stachel, J.P. Wessels

### Participating institutions

The following institutions will participate in the construction of the TRD detector.

- Bucharest, Romania, National Institute for Physics and Nuclear Engineering.
- Darmstadt, Germany, Gesellschaft für Schwerionenforschung
- Dubna, Russia, Joint Institute for Nuclear Research.
- Heidelberg, Germany, Kirchhoff Institut für Physik, Ruprecht-Karls-Universität.
- Heidelberg, Germany, Physikalisches Institut, Ruprecht-Karls-Universität.
- Kaiserslautern, Germany, Fachbereich Elektrotechnik und Informationstechnik, Universität Kaiserslautern.
- Münster, Germany, Institut für Kernphysik, Westfälische Wilhelms-Universität.

### Responsibilities

Table 17.1 presents the sharing of responsibilities for the construction of the TRD detector.

**Table 17.1:** Sharing of responsibilities for the construction and installation of the TRD detector.

Item	Institution
Radiator	Münster
Readout chambers	Bucharest, Dubna, GSI, HD (PI), Münster
FEE and trigger	Bucharest, HD (KIP), HD (PI), Kaiserslautern, Münster
Gas System	GSI
DCS	HD (PI)
HV, LV, cooling	GSI
Overall mechanics	HD (PI)

**Table 17.2:** Global cost of the TRD in kCHF.

Item	Cost (kCHF)
Radiator	423
Readout chambers	3 057
Services (HV/LV, cooling)	1 919
Front end electronics, trigger	7 825
Gas system	525
General	1 220
Total	14 969

### Cost estimate and resources

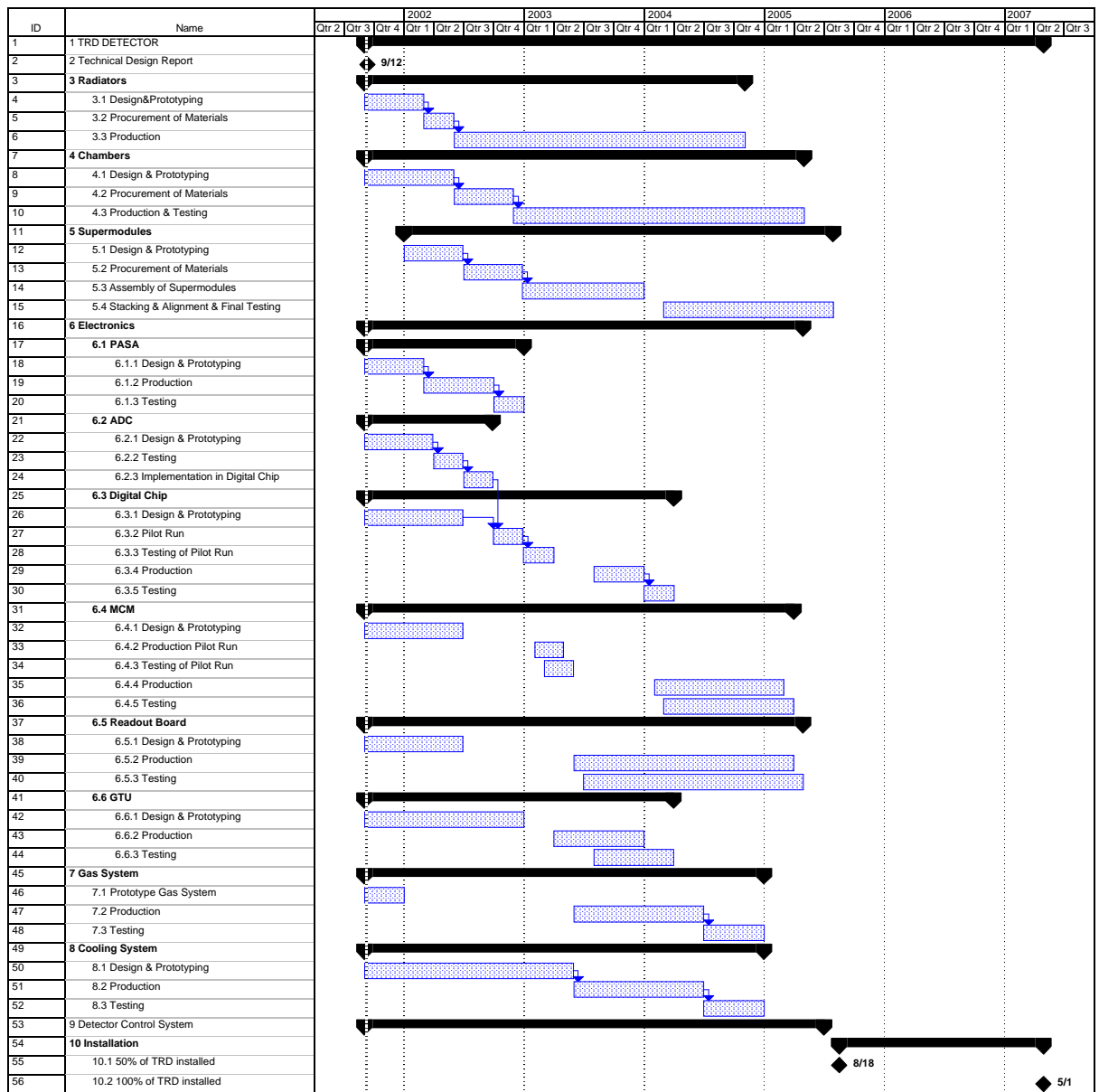
Wherever possible budgetary industrial quotes were used in the cost estimate of the TRD. This was done especially for special components such as: very large printed circuit boards, chip productions, special foams, and carbon fiber materials. In the budget for the readout chambers the numbers rely on actual costs from previous projects and projects under construction (CERES/NA45, ALICE/TPC). In the

cost for the electronics realistic estimates for chip yields and yields for multi-chip modules have been considered. The total cost quoted in Table 17.2 reflects the amount needed to build 100% of the detector.

The resources of the participating institutions cover at present 8.28 MCHF of the costs of the construction, installation and commissioning of the TRD. Additional funds are sought actively.

**Construction program**

The design, construction, test, and installation schedule of the TRD components is summarized in Fig. 17.1. While it is hoped that additional funds can be found in the near future, the time-line for the construction of the TRD assumes production of roughly 50% of the detectors. Assumptions with regard to the design and prototyping phase of the various sub-projects are based on the current progress in these fields.



**Figure 17.1:** Chart of the time-line for the construction of the TRD.