SMART QMS framework for the D2P Accentuator: "Drive to performance for a podium finish" solution finding at the Race Engineering Process Improvement (REPI) organization level

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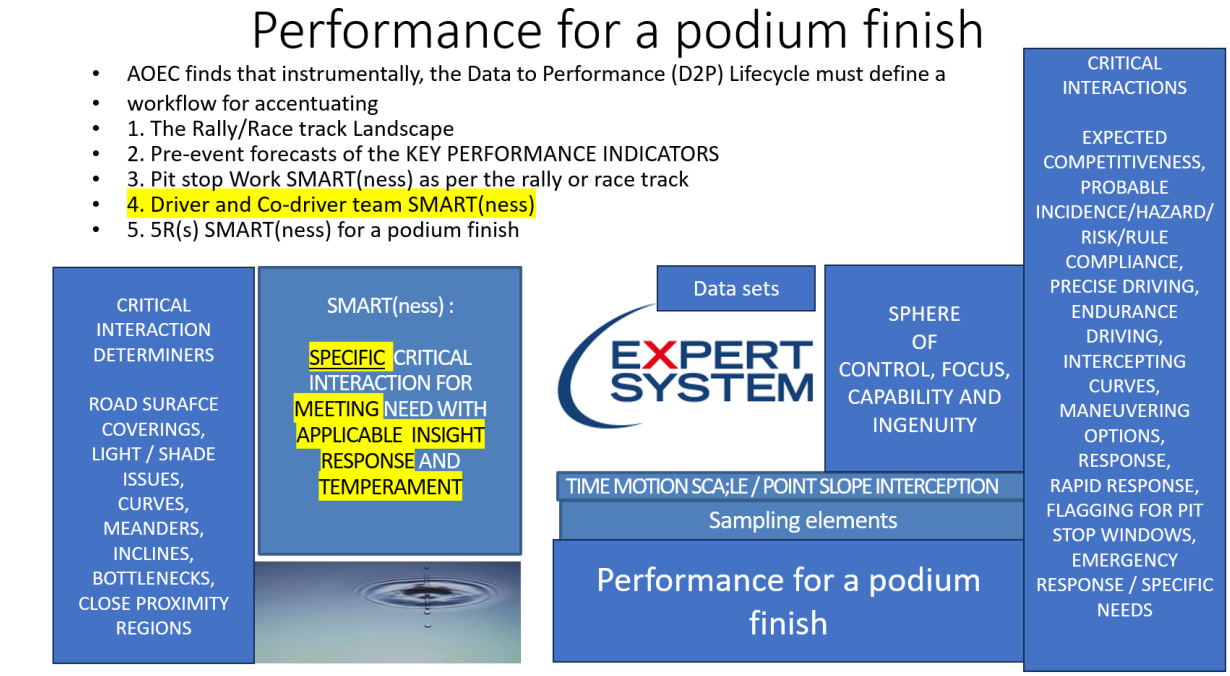
Gap Analysis

Hack the Track challenge



Strategic Planning-Engagement-Participation-Process Improvement (SP-E-P-PI)

What if your Race engineering team, or Driver and Co-driver team, and Drive performance dimensions (DPD) analytics team is interested in improving your Drive to a Podium finish Performance?

The SMART/D2P QMS framework can help any effort conducted periodically, where your Race Engineering Process Improvement (REPI) organization (a collective name) does the following:

1 Reviews its DPD / SP-E-P-PI/D2P quality management system documents including the availability of standard operating procedures to improve quality of strategy and performance management;

2 Reviews its DPD / SP-E-P-PI/D2P quality specific documentation to have a better understanding;

3 Carries out inspections of the vehicles, rally/race/track/important lap records, pit stop window reports, drive performance dimensions reports of rally/race/tracks and their locations, race experience specific circumstances and to have better knowledge of the performance and finish

4 Reviews and improves methodology to be adopted for quality assessment of the D2P Workflows/Lifecycles

5 Reviews and checks the preparedness of the DPD / SP-E-P-PI/D2P quality management system to undergo readiness assessment;

6 Reviews the scope of quality management methodology and to ascertain the requirement of the number of DPD / SP-E-P-PI objectiveness/key considerations to be met;

7 Makes clear to the REPI subscribing teams, the quality management methodology to be adopted;

8 Helps the REPI organization implement continual quality improvement;

Proposal

Implement SMART D2P Convergence in 2 steps

Step 1: **D2P norms and best practices (this document)**

Step 2: “Knowing the DPD / SP-E-P-PI/race engineering” methodologies are emerging, the importance of which may be evident in the race engineering network or industry to provide better services.

It is also proven that apart from the standard expectations set for the **Quality of outcome** in DPD / SP-E-P-PI/race engineering diagnostics, quality levels also depend upon 3 or more factors:

1.Quality of Structure which includes the following
1.1 Quality assurance for Rally/Race/Track Location, Layout and Assisting Facilities
1.2. Quality assurance for Race engineering technology, systems, equipment and devices used

2.Quality of Process

3. Quality of Management Accountability

4. Quality of intime-assessment

The following overview/questions/empirical studies review as to whether the REPI organization is delivering for the D2P roadmap and associated DPD diagnostics today.

The points being discussed can also help the REPI management assess any lacunae.

D2P PROJECT CENTRE DETAILS

Does the REPI organization have any D2P QMS policy, methodology or tool to

1 Review its management system documents including the availability of standard operating procedures to improve quality and REPI cost management? Yes/No/Not applicable

•2 Review its quality specific documentation to have a better understanding? Yes/No/Not applicable

•3 Carry out inspections of the rally/race/track/facilities, location, drive experience real time circumstances and to have a better knowledge of drive performance dimensioning? Yes/No/Not applicable

•4 Review and improve methodology to be adopted for D2P quality assessment? Yes/No/Not applicable

•5 Review and check the preparedness of the Race engineering team/ PSW team to work out issues/requirements? Yes/No/Not applicable

•6 Review the scope of quality management methodology and to ascertain the requirement of the number of REPI/SP-E-P-PI objectiveness/key considerations to be met? Yes/No/Not applicable

•7 Make clear to the Race engineering team, the PSW team, the Driver and Co-driver team the D2P quality management methodology to be adopted? Yes/No/Not applicable

•8 Help the REPI organization implement continual quality improvement? Yes/No/Not applicable

BEST PRACTICES AND PIT STOP WINDOW NORMS

45. Is the scope of PSW services commensurate to the REPI services needed for the rally/race/track? Yes/No/Partially

46. Is the PSW infrastructure adequate to provide such a defined scope of services? Yes/No/Partially

47. Do adequately qualified and trained personnel perform, supervise and interpret PSW investigations/repairs/replacements/ maintenance? Yes/No/Partially

48. Do documented procedures guide the PSW track/lap specific investigations/repairs/replacements/ maintenance? Yes/No/Partially

49. Are PSW resolutions done mostly within a best -practice time frame? Yes/No/Partially

50. Are PSW critical results intimated to the REPI personnel concerned? Yes/No/Partially

51. Are PSW results reported in a standardized manner? Yes/No/Partially

52. Are PSW evaluations/reports not interpreted within the REPI organization outsourced to other REPI organizations based on their quality assurance programme? Yes/No/Partially

53. Is the PSW quality assurance programme documented? Yes/No/Partially

54. Does the PSW quality assurance programme address the verification and/or validation of PSW methods? Yes/No/Partially

55. Does the PSW quality assurance programme address the need to provide records for surveillance of repairs/replacements/maintenance? Yes/No/Partially

56. Does the PSW quality assurance programme include the periodic calibration and maintenance of all systems/equipment/devices? Yes/No/Partially

57. Does the PSW quality assurance programme include the documentation of corrective and preventive actions? Yes/No/Partially

58.a Is the Pit Stop Window (PSW) safety programme documented? Yes/No/Partially

58.b Is the PSW safety programme aligned with the REPI organization's overall safety programme? Yes/No/Partially

59. Do written PSW procedures guide the handling and disposal of hazardous materials? Yes/No/Partially

60. Are the PSW personnel trained in safe practices? Yes/No/Partially

61. Are the PSW personnel provided with appropriate race engineering systems/equipment/devices? Yes/No/Partially

RALLY/RACE/TRACK related NORMS

62. Is the scope of REPI services for the rally/race/track commensurate to the REPI services expected? Yes/No/Partially

Do the REPI services comply with legal and other standardized requirements for controlling risk/hazard/track incidence? Yes/No/Partially

63. Are the rally/race/track facilities adequate to provide such a defined scope of REPI services? Yes/No/Partially

64. Do adequately qualified and trained REPI personnel perform, supervise and interpret pit stop window repairs/replacements/maintenance? Yes/No/Partially

Are the SOURCES OF INFECTION possibly known for the customer? Yes/No/Partially

Are the PATTERNS OF ANTIBIOTIC CONSUMPTION known for the customer? Yes/No/Partially

65. Do documented policies and procedures guide identification and recording or reporting of race/rally/track/lap assessments for REPI

programmes? Yes/No/Partially

66. Are results from the REPI programmes available within a defined time frame? Yes/No/Partially

67. Are critical rally/race/track/lap results intimated to the REPI personnel concerned so assistive planning can be done? Yes/No/Partially

Are Vehicle/Systems/Parts/Components Degradation Susceptibility Test (DST) results generated? Yes/No/Partially/Not applicable

68. Are D2P rally/race/track/lap records reported in a standardized manner? Yes/No/Partially

Are important D2P rally/race/track/lap records specifically tagged and thereon reported in a standardized manner? Yes/No/Partially/Not applicable

69. Are D2P Assistive Systems tests not available within the REPI organization outsourced to other REPI organizations based on their quality assurance programme? Yes/No/Partially

70. Is the D2P Assistive Systems and Technologies quality assurance programme documented? Yes/No/Partially

71. Does the D2P quality assurance programme address the verification and/or validation of D2P rally/race/track specific methods? Yes/No/Partially

72. Does the D2P quality assurance programme address the surveillance of results as reports/data sets? Yes/No/Partially

73. Does the D2P quality assurance programme include the periodic calibration and maintenance of all systems/ equipment/devices? Yes/No/Partially

74. Does the D2P quality assurance programme include the documentation of corrective and preventive actions? Yes/No/Partially

75. Is the DPD / SP-E-P-PI/D2P programme specific (hazards prevention & control) safety programme documented? Yes/No/Partially

76. Is the safety programme aligned with the REPI organization's overall safety programme? Yes/No/Partially

77. Do written procedures guide the track personnel and driver & co-driver team in their handling of possibly hazardous emissions/materials?

Yes/No/Partially

78. Are the track personnel and driver & co-driver team trained in safety practices/measures? Yes/No/Partially

79. Are the track personnel and driver & co-driver team provided with appropriate safety equipment/devices? Yes/No/Partially

MANAGEMENT ACCOUNTING AND REPI COST MANAGEMENT NORMS

The (subject of discussion) related dataset evaluations, D2P level questionnaires and empirical studies can help assess the impact of REPI Project Centric management accounting for any rally/race/track/important laps specific performance and can help align D2P expectations with sustainable and continual Quality of strategy with REPI cost control.

Sustainable Quality of Strategy refers to the convergence seen between the vision, planning and implementation of REPI/DPD/SP-E-P-PI methodologies with in-time responsiveness & supportive race engineering for the drive performance.

For improved safety in the drive to performance, the proposal also recommends the use of a NABL standards driven QMS system for Medical Devices and Equipment that can be used in a rally/race/track event and in connection with the Driver and Co-driver team/Race engineering team and DPD analytics team.

A first level version of the same is available and can be shared / discussed as needed.

Notes