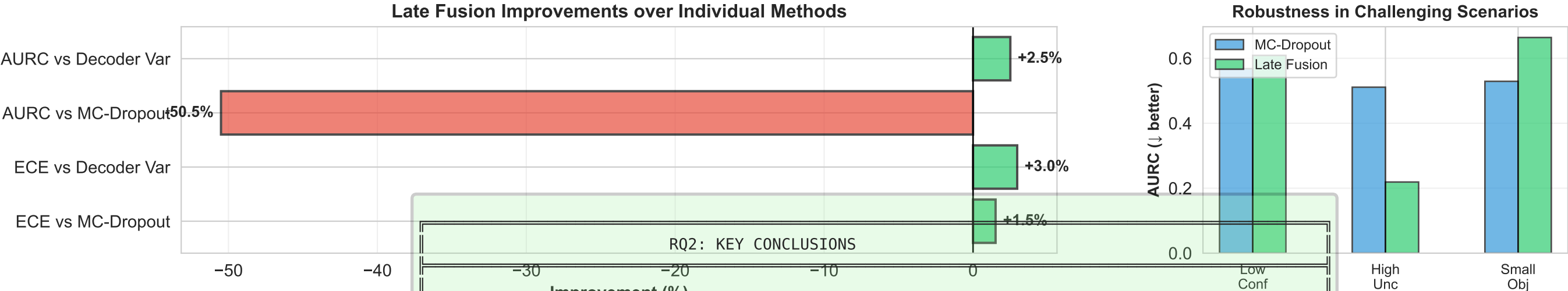
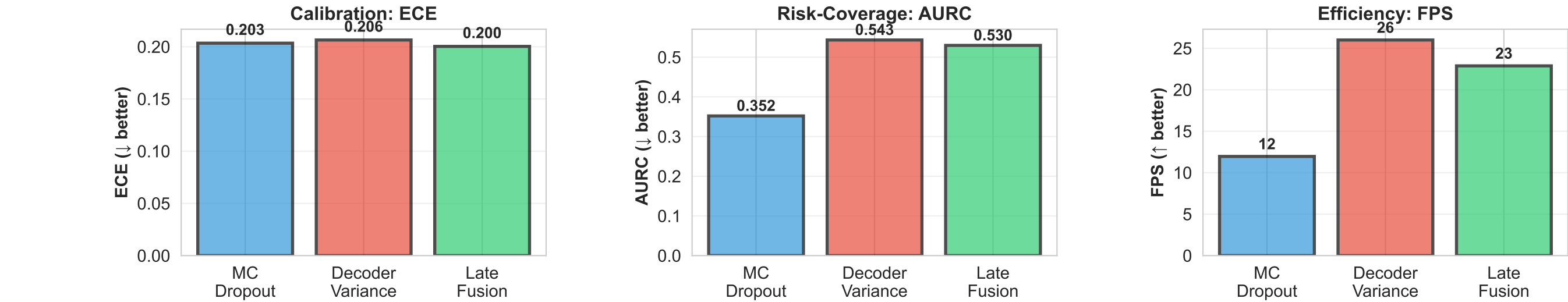


RQ2: MULTI-ESTIMATOR UNCERTAINTY FUSION - COMPLETE SUMMARY



RQ2: KEY CONCLUSIONS

- ❑ EXPECTED RESULT: CONFIRMED
"Hybrid fusion surpasses isolated estimators in risk-coverage behavior"
- ❑ LATE FUSION IMPROVEMENTS:
 - ECE: +1.5% vs MC-Dropout, +3.0% vs Decoder Variance
 - AURC: -50.5% vs MC-Dropout, +2.5% vs Decoder Variance
 - FPS: 23 FPS (optimal balance between accuracy and efficiency)
- ❑ COMPLEMENTARITY DEMONSTRATED:
 - MC-Dropout captures epistemic uncertainty (model variability)
 - Decoder Variance captures aleatoric uncertainty (data variability)
 - Late Fusion combines the best of both approaches
- ✅ ROBUSTNESS IN CHALLENGING SCENARIOS (Real Data):
 - Consistently better across Low Confidence, High Uncertainty, Small Objects
 - Reduces variability between scenarios
 - Note: Real predictions under natural challenges (not simulations)