

Shire's Approach to Innovation

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Shire is creating a unique leadership platform

The leading rare disease-focused biotech

Sharp focus leads to high impact



Focused patient communities

*Rare diseases
Highly specialized conditions*

Precision innovation and technologies

Culture of collaboration and execution

Global resource and expertise

High patient impact

Breakthrough therapies for patients with significant unmet needs

High societal value

Improved patient outcomes and value for customers

Sustained growth

Sustainable rare disease market serving multiple patient communities with high unmet need

The unmet need in rare diseases and highly specialized conditions creates an opportunity for innovation



Life-altering conditions with significant unmet needs

- Debilitating, often life-threatening conditions with substantial impact on patients and their caregivers
- Significant demands on healthcare systems: chronic treatment, repeated hospital visits, supportive care
- Societal economic burden due to patient and caregiver leave and loss of productivity



Opportunity for innovation

- Over 7,000 diseases, of which only 5% have treatments
- Increasing share of regulatory approvals in US, EU and Japan
- Often accelerated development due to priority review and phase-skipping
- R&D incentives, and lower overall R&D costs



High sector growth

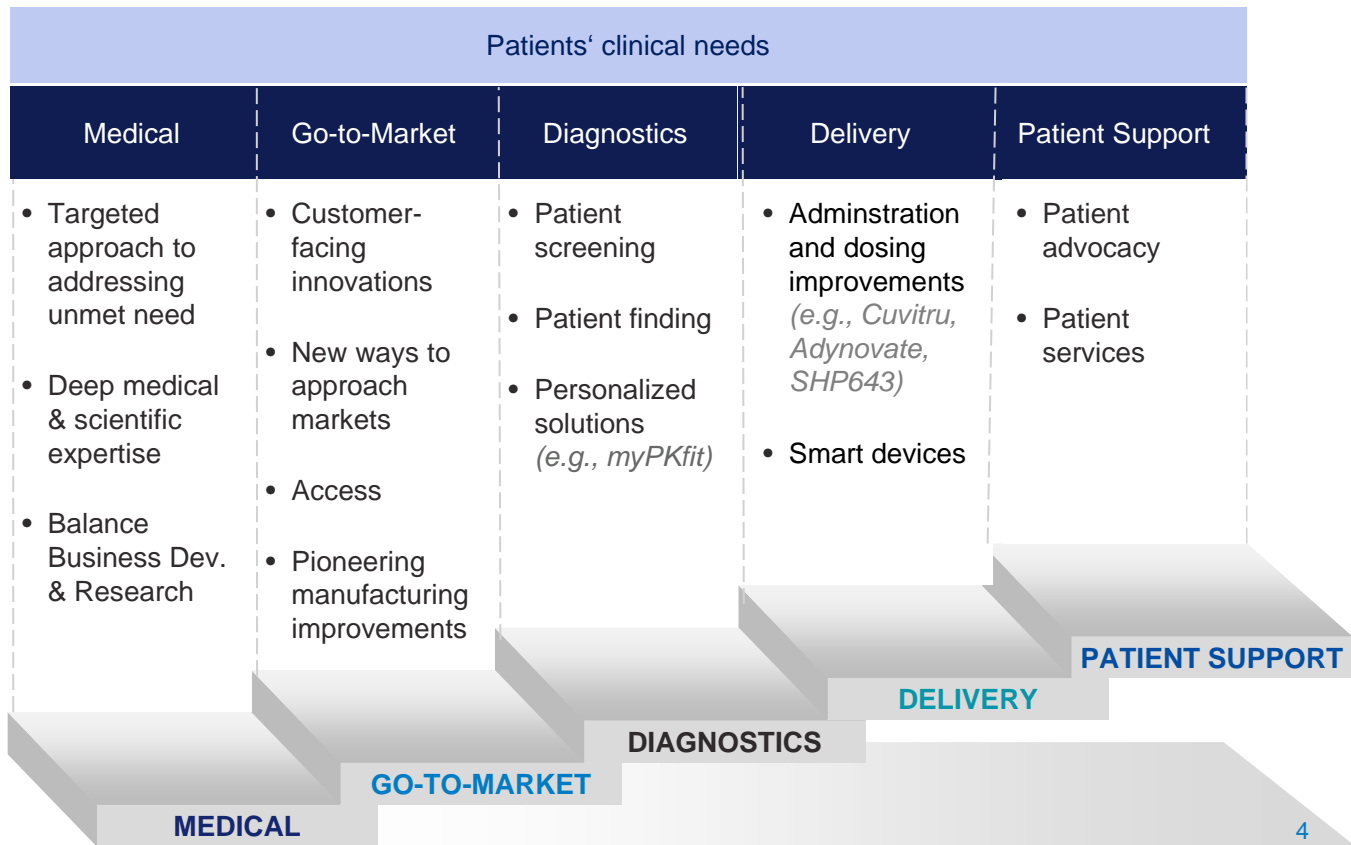
+12% CAGR for rare diseases,
vs 6% projected for pharma overall through 2020⁽¹⁾



Extraordinary patient impact

Breakthrough therapies and improved patient outcomes

Shire brings a focused, stepwise approach to innovation that meets the needs of patients across therapeutic areas



Shire builds therapeutic strategies with first in class, best in class and differentiated products

Serial innovation

Order of Shire entry

Neuroscience (ADHD)

Adderall → Adderall XR → Vyvanse → Intuniv → SHP465*

GI

Pentasa → Lialda → Gattex → SHP647* (IBD) → SHP 621 (EoE) → SHP626* (NASH)

Genetic Diseases (LSDs)

Replagal → Vpriv → Elaprase → SHP609* (Hunter IT)

HAE

Firazyr → Cinryze → SHP643*

Ophthalmology

Xiidra → SHP640* (Conjunctivitis) → Preclinical program for adRP

Endocrinology

Plenadren → Natpara

Immunology

Gammagard / Kiovig → low IgA → HyQvia → Cuvitru

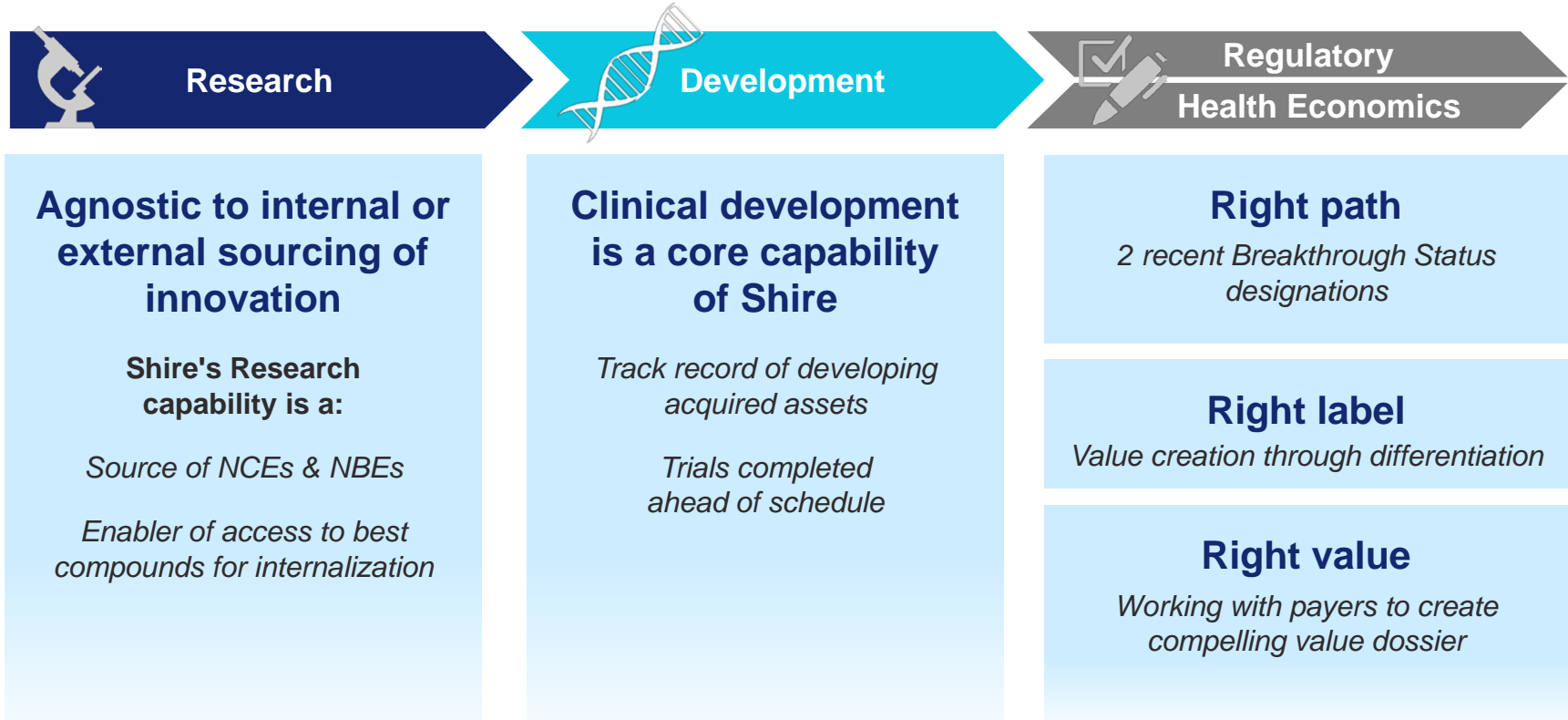
Hematology

Advate → Adynovate → Vonvendi → SHP656* (Hem A, BAX826) → Gene Therapy*

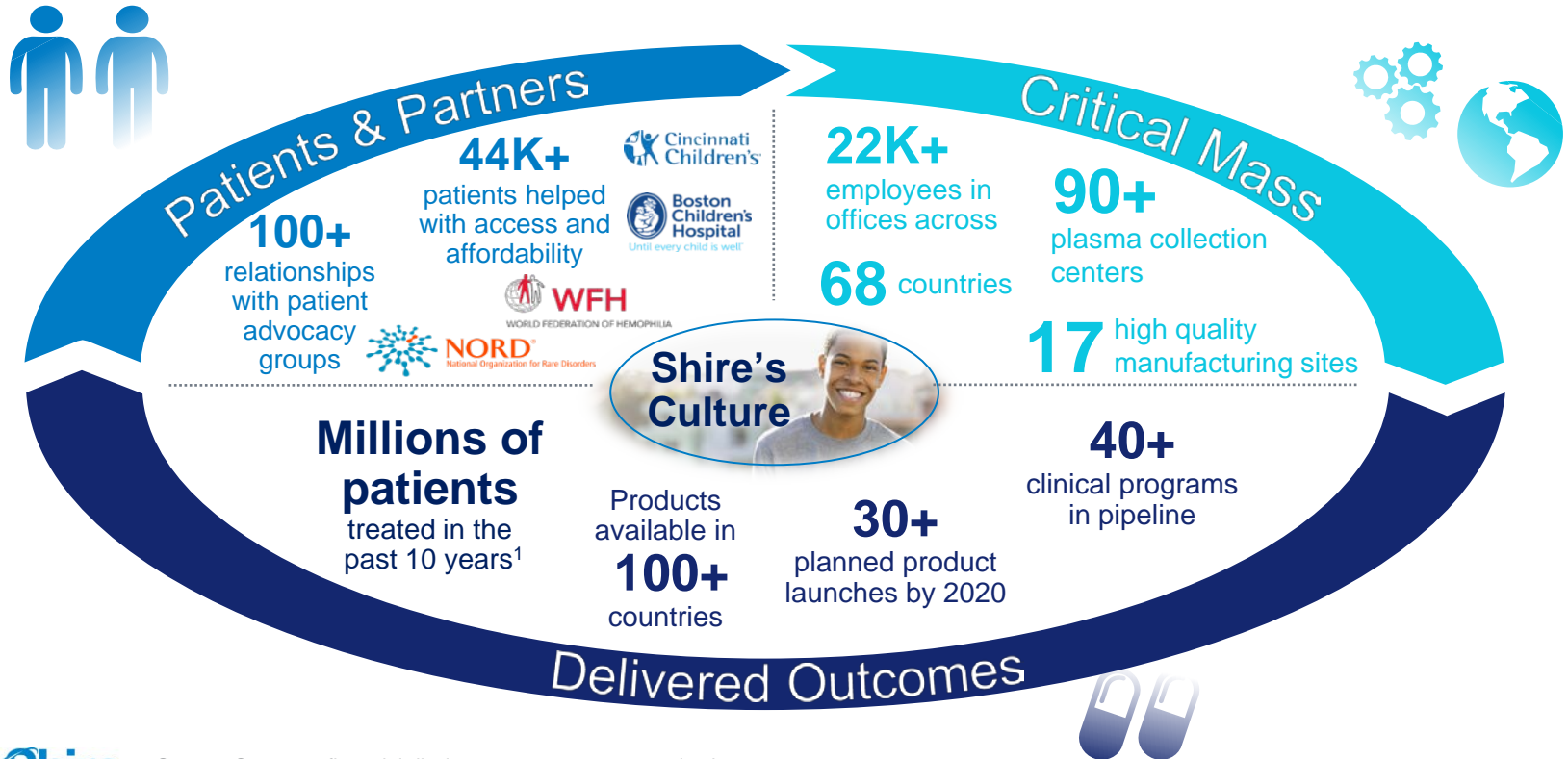
Oncology

Oncaspar → Calaspargase Pegol*

Shire's innovation engine streamlines the development, regulatory and value demonstration process...

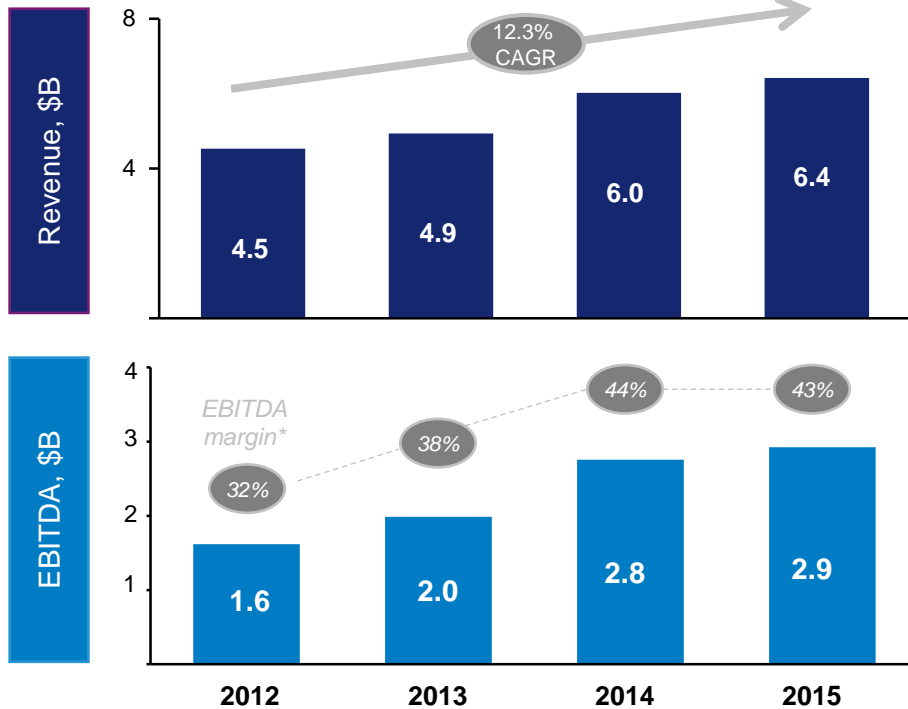


...and leverages our partnerships with patients and healthcare providers to bring our medicines to a global audience

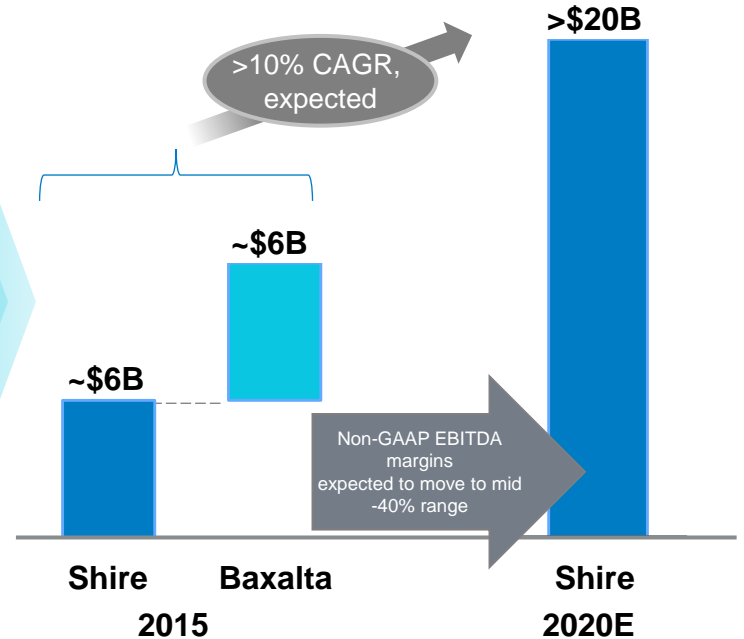


Delivered consistent historical revenue and profitability growth, with the right strategy for continuing this trend

Strong growth over the last several years



Addition of Baxalta expected to fuel continued revenue growth toward our stated "20 x 20" goal



Net debt / EBITDA anticipated to reach 2-3X by end of 2017

Source: Company financial disclosures, management projections
 * Non GAAP EBITDA as a % of product sales, excluding royalties and other revenues

Several key growth drivers that should play an important role in helping us achieve our \$20B by 2020 aspirations



Significant pent-up demand

- ~16M diagnosed patients in US with limited treatment options

Strong launch

- In 2+ mos since launch, >75K Rx's; 17%TRx & 45%NBRx market share

Hemophilia

Increased diagnosis, prophylaxis rates and personalization

- Expected drivers of continued growth, especially in ex-US markets
- Decades of clinical experience and data generation

Recent and upcoming launches

- Adynovate, Vonvendi, Obizur expected to contribute meaningfully to revenue by 2020

ADHD / BED

Few signs of adult market saturation

- Adult market continues to outpace total ADHD market

Expected approval and launch of SHP465 in 2017

- Provides further revenue driver for franchise

International markets

- BED and adult ADHD international roll-out

Phase III Pipeline*

20+ registered / Phase III programs, most expected to launch by end of 2020

6 new molecular / biologic entities to be highlighted today

SHP607 (neonatology complications)
SHP620 (CMV infection)
SHP621 (eosinophilic esophagitis)

SHP643 (hereditary angioedema)
SHP647 (inflammatory bowel disease)
SHP465 (ADHD)

We run our business in a responsible and ethical way and are accountable for our social, economic and environmental impacts

Our Leadership



GLOBAL DAY OF SERVICE 2016
#SHIREGDS

Our Culture

- Working with global humanitarian aid organizations to improve access to Shire's rare disease medicines
- Supporting the next generation of medical geneticists
- Enabling children with serious illnesses to participate in camp experiences
- Organizing Shire's annual Global Day of Service where employees volunteer and get involved with community projects around the world
- Recently recognized by AllTrials as the #1 pharmaceutical company for our clinical trial transparency record



Conducting a STEM experiment at a school for children with special needs at Shire's most recent Global Day of Service

Shire's profile as we approach 2017



- We have built the leading biotech focused on rare disease and highly specialized conditions
- Deepest and most innovative pipeline in our history
- Expected to deliver double digit top-line growth
- Anticipated expanding Non GAAP EBITDA margins
- Cash generation allows near-term debt servicing
- Stated goal of \$20B in revenues by 2020

